DOCUMENT RESUME

ED 187 159 HE 012 240

AUTHOR	Harris, R. G., Ed.
TITLE	Overseas Universities 26.
INSTITUTION	Inter-University Council for Higher Education Overseas, London (England).
PUB DATE	Aug 79
NOTE	55p.
AVAILABLE FROM	Inter-University Council for Higher Education Overseas, 90-91 Tottenham Court Road, London, W1P 0DT England
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Agricultural Skills; Computers; *Developing Nations; *Educational Cooperation; *Educational Policy; English for Special Purposes; *Higher Education; Humanities Instruction; International Education; *International Programs; Overseas Employment; Staff Development; Technical Institutes
IDENTIFIERS	*Africa; *Asia (Southeast); Indonesia; Japan; New Guinea; Zambia

ABSTRACT

Educational policies and programs in overseas universities of developing nations are explored in a series of nine articles. In "Development and the Role of the Humanities," Sir Cyril Philips calls for a reconsideration of the role of the humanities in the educational policies of developing nations and international aid-giving agencies. Malcolm Cooper reports on "The University of Malaya English for Special Purposes Project" using cognitive and specialized reading strategies data, and Neil Mortimer reviews syllabus design techniques in "E. L. T. Course Preparation and Production at Addis Ababa University." Staff training and development in Indonesia are explained by L. R. B. Elton and Gaye Manwaring in "Towards a Staff Development Programme in South East Asia," community perceptions of higher education are documented by Maev O'Collins in "What is Happening to My People? Community Research by Students at the University of Papua New Guinea," and the social implications of Japanese textbook censorship are assessed by Glenn D. Hook in "Institutionalized Censorship: The Ideological Control of Post-War Japanese Education." Finally, R. J. P. Scott describes "A Computer Installation in a University in a Developing Country" (Zambia), T. G. Bonner documents African agricultural research efforts in "Universities and Overseas Development," and Paud Murphy provides detailed information on "The Development Cooperation Work of Irish Universities and Institutions of Technological Education" in countries like Nigeria, Zambia and Peru. Each article is followed by notes and references. (DC)

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Articles, reports and correspondence should be addressed to the Editor, c/o the I.U.C., 90/91 Tottenham Court Road, London, W1P 0DT

Cover Design by Jennifer Harris. The motif was photographed from "African Crafts and Craftsmen" by Rene Gardi, published by Van Nostrand Reinold Co. 1968. It is a brass miniature sculpture from West Africa and represents a Knot of Wisdom.

Published by the Inter-University Council for Higher Education Overseas and printed by Direct Design (Bournemouth) Ltd., Butts Pond Industrial Estate, Sturminster Newton, Dorset, DT10 1AZ

UBS. University College Kwaluseni Swaziland April 1979

Photograph by Mr. R. A. Rooke of Manzini Swaziland.

A. Science Pre-Entry Labs/classrooms B. & D. New hostels C. New library extension E. New staff houses

Editorial

When we review our ideas on the dynamics of "development" it is natural for us to think first of practical subjects like Agriculture, Medicine, Engineering, and of Science in its various applied forms — irrespective of from whatever shore of whatever ocean we look "overseas". In developing areas it would be strange — some would say immoral — not to accord priority to activities for increasing the food stock, the condition of health and the availability of life-easing artefacts and the foreign exchange they save or earn. The priorities are further reinforced by such factors in recent Western democratic, and even Communist, experience as the doubts about or distrust of their own values, moral codes or cultures by the articulate citizens of these technologically more advanced areas, and are further strengthened by those — at least those from the West — implementing aid schemes in developing nations consciously avoiding the propagation of "values" while they energetically pursue seemingly neutral scientific-technological projects. Of course, on the one hand, Science and Technology are no more neutral than Literature, History or Theology — in fact the reverse, since they are the purest distillation of the most powerful psychic formation of modern industrial and urban culture; but, on the other, one effect of a natural diffidence — so as to avoid the "neo-colonialist" tag — about promoting one's own culture away from home is that the notion of culture or value as such is devalued and therefore so is any particular ethnic base and any educational studies through which a knowledge of value is consciously pursued. Hence the oscillating love-hate respone of developing nations towards the sources of aid or assistance and towards development itself. However, once this cast to the sentiment of the relationship is accepted as natural — such mixed emotions are, after all, the norm in many other kinds of quite creative relationships — the process of adjustment can go on. This adjustment can hardly avoid cultural infection since even the most applied Science and Technology does not run as an insulated current and therefore it is both intellectually inconsistent and a brake on material progress itself if the concept of development inherent in entertaining the embrace — even in a courtship of convenience — of technology is not equally applied to culture and value, and the possibilities of progressively refining them given due credit.

These are some of the issues raised by Sir Cyril Philips' call for a reconsideration of the role of "the humanities" in the education policies of developing nations — though by no means only there; and, as he suggests, developing nations might recognise the advantage to their own self-interest by encouraging study in those prime sources of value through which their national self-hood and culture is shaped and inspirited, and in thus actively attributing worth to the local and specific, and because pride in and of the species is a powerful energizer of moral consciousness throughout the genus, affirm implicitly the possibility of the progressive development of what, though imaged in terms of culture or politics, are basically moral categories.

When we actually turn to the humanities and to their most persuasive medium, language — where, not least because of the demands, in Education, of Science itself, the matter is most urgent — we notice Malcolm Cooper touching on the same polarities in another key when he observes, in connection with the U.M.E.S.P. Project, that "there is, up to a certain level, a definable common core of vocabulary, grammatical structure and text structure which is an essential basis for competent reading . . ." — and he puts the common core at 75% — and that only at the more rhetorically specialised levels (as in socio-psychological affairs likewise) do contingent factors start to take effect. He also points out that a major difficulty facing the project was the inability of the students to operate higher order cognitive strategies, that is, those most fundamental to the psychological logic of modern "Western" culture. It is also interesting, in this respect, that Neil Mortimer's team at Addis opted for a "structural approach", using notions like "size" and "amount", primary concepts of both science and language in the target culture — and also of any villager's daily life — rather than "topics" or "settings". Further, even "overseas" staff training and development, as Professor Elton's group conclude, is a response to this interaction of universal and particular: "this tension between adaptation to institutions elsewhere . . ." — the universal element — ". . . and adaptation to changing local conditions . . ." — the specific element — ". . . is a source of strength"; it is all the more important for teachers in higher education to

be able to "knowledgeably assess both the value of tradition and the need for innovation . . .", and this is the raison d'être of staff training in these circumstances.

Various ways in which, in education in its widest sense, a structurally similar tension is resolved or adjusted to suit particular needs and temperaments are described in Maev O'Collins' article on the "re-entry" programmes of Papua New Guinea students. (Of course, the entire body of "classic" African writers wrote on little else but this theme). Some, after years away from their village communities "universalizing" themselves through education, find their fullest satisfaction in maximum re-integration, for others it is "not a complete re-entry and they just accept a different role as a bringer or interpreter of new ideas and as a link between the community and the resources available from government and other agencies . . .". And we recall Sir Cyril's words on "progress" when we come across Glenn Hook's comment that the "underlying conflict" in the Japanese text-book certification issue is "between those who view the education system as a vehicle to change attitudes and values and those who view it as a tool to maintain the status quo". It is, indeed, impossible to escape the effect of "values" whether inherent in beliefs or life-styles or in the metalogical rules to which they correspond.

It may seem a relief to get back to a simpler form of humanistic effort, computers, via Bob Scott's blueprints for their application in University institutions; and to our earlier theme of cooperative links, here, in Professor Bonner's illustrations, for the purpose of directing productive applied research: his example of the Brazilian extraction of petrol from ethanol from cassava is particularly appropriate in the current energy crisis. It may well be, though, that from such major crises, world-wide, the need to cooperate with nature rather than to conquer it (to use Sir Cyril's words again) will be forced onto science and the radical dislocations in the conditions of material and therefore social life drive moral consciousness and material progress willy-nilly into a more harmonious conjunction, a better balanced model of "development", and the fuller sense of "Nature" return to all our vocabularies.

R.G. Harris

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The views expressed in these contributions are those of the authors and do not necessarily represent those of the Inter-University Council.

Development and the Role of the Humanities

C.H. Philips

(This article is based on a paper given at the Conference of Overseas Vice-Chancellors in Jamaica, 1979)

In the developmental policies both of national governments and of aid-giving agencies, the humanities in higher education are often given a low priority. Generally speaking, too, they do not stand high in public esteem. It is for science and technology that support is usually sought and readily given. So marked a difference of emphasis within higher education in the pursuit of national development raises practical and philosophical questions of some importance.

The role of nationalism in development is still dominant. In his opening address, Shridath Ramphal, Secretary General of the Commonwealth Secretariat, who was examining development in the context of international cooperation, understandably drew attention to the constraints exercised by nationalism, national governments and political sovereignty. No one can doubt that nationalism remains the greatest driving force for good and ill in the modern world. In their statements to us, for example, the Vice-Chancellors of the two youngest Universities of Papua-New Guinea and of Juba took this for granted and made it clear that they see the future success of their Universities wholly in terms of the emergence of a national spirit.

Everywhere peoples and governments are preoccupied with the dual task of giving expression to their own national spirit and of seeking a sense of national identity. Fairly recently in a conversation with the then Minister of Higher Education in Iran I asked him what in his view was Iran's greatest problem. He replied that Iran was basically a tribal society, long since converted to Islam as a faith and way of life, with a deep tradition of highly centralized, autocratic government, now bent on using its oil revenues to westernize and modernize the country, with most of the people desiring for themselves the good things that can be extracted by the use of western material culture. "In this mixture", he concluded, "Iran's greatest problem is the search for a national identity".

Many third-world countries contain a not dissimilar mixture of factors at work and cannot but be apprehensive that policies of development will prove to be for them as explosive and destructive as in Iran.

Most governments and peoples seek development and the fruits of western material culture, and regard the use of science and technology as directly leading to these ends. They see them as instruments which can be politically neutral and yet internationally available, also flexible and capable of ready and appropriate adaptation for national purposes. The humanities, by comparison, form part of and emerge out of a people's own culture; they are idiosyncratic and intimately related to fundamental social purposes, forming the essence of nationalism and therefore bound up with national politics. We thus face the paradox that while nationalism as an emergent and dominant force continues to ride high, and nowhere higher than in the countries of the third world, the role of the humanities in higher education is apparently given low priority in the esteem of many of their governments.

In the rise of the European nation states in the nineteenth century, the cultivation of the humanities and of national culture tended to proceed hand in hand. Among the governing groups in Britain, for example, the classics were seen as providing the basis of civic responsibility; philosophy as inducing wisdom; divinity as indicating a faith, an ethos, a way of life; literature as deepening experience; and history as cultivating political judgement, and exploring and justifying the idea of progress. Taken together they constituted education in its fullest sense, teaching the individual and society how to live and what to live for, providing, too, the basis and mainspring of leadership.

The idea of progress also largely inspired the scientific and technological revolution of the nineteenth century in the west, so that there was a

fair unanimity of view in science and technology as in the humanities on the idea of progress, not only material but also social and moral.

But the rising and ugly tide of industrial society, accompanied by two world wars and culminating in the manufacture and use of the atom bomb undermined confidence in the moral and social role of mankind in nature. In the process of conquering rather than cooperating with nature, the vision of man's moral progress faded and the study and practice of the humanities deteriorated into confusion, and often social triviality. All that now seems to remain is the image of the scholar in an ivory tower.

In the communist countries, in a context that is avowedly materialist, the humanities naturally take a subservient and secondary role. Material progress may be seen as inevitable, but only in a marxist, pre-determined way, which treats the interests of the individual as wholly subordinated to those of the state.

This record surely forces us to try now to be clear about the concept of development and what it is for. Essentially it is a western concept. In the classical literatures and philosophies of China, Japan, India and Islam we do not find the formative ideas of growth and evolution. They present a historical framework that is either static, repetitive, or cyclical. In the emergence of the modern west this concept is indissolubly linked with science and technology, and there can be no question that by their use man has increased his control over his environment. But in the process belief in moral progress has faded.

But the idea of evolution nevertheless does give man the opportunity of evaluating the difference between deliberately attempting to pull himself into the future as against simply being pushed onward by the blind forces of nature. In seeking the deeper purposes of mankind it appears to be necessary through the humanities no less than science and technology to rediscover and reaffirm the implications of the concept of progress and to demonstrate that mankind is capable of expanding the bounds of human progress in the widest sense.

When Macaulay visited the Great Exhibition in London in 1851, which celebrated western Europe's progress in the arts and manufactures, he experienced, he said, the same feeling of awe which he had felt on first entering St. Peter's in Rome. For him both represented triumphs of the human spirit. Both justified human history and mankind's progress, material and spiritual. Much the same could be said of many of the supreme achievements of the twentieth century. But to carry the argument an essential step further we need to accept and emphasize that policies of development are not ends in themselves, and that they need to be infused with the twin purposes of enhancing the dignity of the individual and the brotherhood of mankind. Without these purposes, progress and development for the individual as for the nation are seen to be historically sterile. And a nation state which in its policies of development does not encourage and support the study of the humanities in higher education is invoking precisely this judgment on itself.

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University of Gezira, Preparatory College, Main Lecture Theatre and Library, March 1979.

The University of Malaya English for Special Purposes Project

Malcolm Cooper

My purpose in this paper is to describe and comment on an educational project, paying particular attention to those features which are likely to be of relevance and interest to institutions elsewhere searching for solutions to problems concerning the role and effective use of a second language in learning.

In Malaysia, in 1974, when the Project was born, the educational system was well advanced in the process of changing the medium of instruction of all institutions which still used English to the national language — Malay. This process was scheduled to be complete by 1983. English was officially endorsed as the second most important language and as the main medium for access to the latest developments in the sciences and technology. Indeed, at the University level, the majority of academic textbooks were in English. Thus, if Malay-medium University students were to be able to go beyond the information that they were given in Malay by their lecturers and tutors, they would need a competence in reading English which was akin to that of an educated native reader of English.

The authorities in the University of Malaya realised that this level of competence simply did not exist. There was a very large gap between the English reading competence of the school-leaver, (even after eleven or more years of studying English as a subject) and the level required to be able to use University textbooks with ease and efficiency. Since the whole University population would ultimately come from Malay-medium schools, the University was faced by the prospect of a student community the majority of whom would be unable to take full advantage of a University education — assuming, that is, that such an education implies the ability to extend one's knowledge independently.

Anticipating this problem, the University of Malaya had already conducted a series of small-scale experiments under a programme called "Read and Understand" in order to try out possible solutions. The Vice-Chancellor, Professor Ungku A. Aziz then decided that the time was ripe for a major research effort, and Professor John Sinclair of the University of Birmingham, United Kingdom, was invited to survey the situation and make a research proposal.

Following this, in March 1975, the University of Malaya launched the English for Special Purposes Project (UMESPP) jointly sponsored for three years by the Inter University Council, the University of Birmingham and the British Council. Its objective was to research and design materials, methods and testing techniques to enable students to read their academic textbooks efficiently.

ADMINISTRATION OF THE PROJECT

The project was under the joint direction of the Director of the University of Malaya Language Centre, Professor Asmah Haji Omar, and Professor Sinclair (Academic Director U.K.). It was organised and coordinated by an English Language Officer, seconded as Visiting Lecturer and Project Organiser by the British Council, and his Malaysian counterpart Tan Soon Hock. The work was carried out by a Project team of five persons altogether, four of whom were initially on a part-time basis. The organiser and his counterpart were joined by Nesamalar Chitravelu, Ng Sau Pheng and Khong Chooi Peng. The project had one clerical assistant and received the continuous support of the Language Centre's administrative and clerical staff. The Project reported annually to a Steering Committee chaired by the Vice-Chancellor who maintained a close and dynamic interest in every aspect of the Project. Indeed, his concern was crucial to the success of the work. A Liaison Committee, which met annually in the U.K., enabled all the sponsors to contribute to its development.

The cost of research and development in Malaysia was borne by the University of Malaya. Annual estimates were submitted in the normal way. Provision was also made for training and study for the Malaysian team members at the University of Birmingham, and for consultancy visits from specialists in the field of English language teaching and testing at British Universities. Costs were met by the University of Malaya and the Inter University Council, with assistance from the British Council.

This necessarily brief sketch of the administration of the Project is perhaps sufficient to demonstrate that, in the words of the Vice-Chancellor, UMESPP would be "an attempt by an academic institution to solve an academic problem in an academic way". In the first place, it was recognised that finding a solution needed time; time to find out what the problem was from as many facets as were relevant; time to work out and try out possible solutions; time to make and correct mistakes; time to evaluate and revise. Three years proved to be a reasonably satisfactory period for all these operations. Secondly, all these things needed money. It soon became obvious that so long as the Project gave evidence of relevant and purposeful work, it would not lack resources. Thirdly, the Project would benefit by professional links with other institutions and professionals; in this way there would be less risk of myopia developing, and objective evaluation of progress would always be available. Hence the direct link with the University of Birmingham, and subsequently with consultants in the University of Edinburgh. Fourthly, it was recognised that the Project could only really count itself successful if it developed personnel with skills not only to contribute to it, but also to evaluate, improve and maintain it, train others to understand and use it, and then apply their skills to the solution of fresh problems. For these reasons, time was devoted to training in the early stages in Malaysia, and then at the University of Birmingham for periods of eight months. More recently, the necessary infrastructure for project maintenance, dissemination and extension (following the first three year phase) has been planned; and indeed in March 1979, as the first stage materials were going to press following their trial and revision, specialist materials were being developed for Economics students to parallel those produced for Science students.

Finally, in an era of rapid development and change, the ability of administration at all levels to respond flexibly to events proved of particular significance. For example, one complication for the Project was that its target student group changed twice during the course of the planning and research. Originally it was to have been first year students. It then changed to include pre-University students on a one year Science course; a further change shifted the focus to a two-year pre-University Science group, as a direct result of the University's attempts to solve another problem, that of helping disadvantaged rural students to prepare for a University Science education for which they had the potential. Such problems put new demands on the Project, and, in consequence, on the University administration. The response was inevitably flexible and creative.

DEFINING PROBLEMS AND NEEDS (MARCH 1975 — JUNE 1976)

We started work with a large number of questions, not all of which we were able to answer empirically, but for which we could certainly devise trial solutions. Here are some of them:

The students

Why did so many students fail to reach anywhere near the required standard for reading threshold University texts in English, in spite of eleven years or more of exposure to the language as a subject?

What was the attitude of students to English? How did the language fit into their short-term and long-term plans? If they studied in English, what language and skills did they need? What did they *want*? What was their previous experience of learning English like? What was their notion of language teaching and of the language classroom?

What was the nature of their general educational experience? What notion did they have of learning in a University setting?

The language teachers

What was the attitude of language teachers to language teaching? What notions did they have of the content and methodology of language teaching in their own setting? How did they conceive of their roles as teachers and the students as learners?

How did they perceive their students' problems and needs? What kind of solutions would they recommend?

The subject teachers

To what extent did teachers of Science, Economics, etc., require their students to read in English? How did they perceive students' problems and needs in using English textbooks? What kinds of skills and strategies would their students need in order to fulfil learning tasks which required reading?

It will be readily noted that the questions and their potential answers relate not merely to teaching and learning language but to the nature of educational processes themselves. It was important to us to know how teachers characteristically taught and students characteristically learned, for three reasons: first, so that we would know what teachers and students were used to and thus how carefully we would have to phase in any novel experience; secondly, so that we would know the range of alternative methods and activities we could call upon, one of the important resources of the language teacher being the option to take content that is familiar to the students, present it in

different ways and ask him to perform different operations on it. Finally, we needed to know how far students were obliged to make use of textbooks in English and the kind of assistance in developing reading skills that subject specialists might be able to give us. For our part, we had a fairly sophisticated notion of what reading at the University level might consist of. If there was a great disparity between our notion and reality, then it would have an influence on materials and methods design. For example, if, despite our terms of reference, we found that students actually did minimal reading in English because they could "get by" without it, we could have to work particularly hard to make a reading programme motivating and credible; and subject specialists could make a vital contribution, not least in ensuring that independent reading ultimately played an adequate role in their educational strategy.

To find answers to our questions we used a variety of diagnostic reading tests, questionnaires, interviews and observations of teaching. Our testing confirmed that Malay-medium students performed less than half as well as English-medium students in tests of reading comprehension in English; and that the problem was primarily linguistic. For example, students showed that they lacked in English the important strategy of predicting the meaning of the unknown by using what is known in the context; but they also had such low recognition vocabularies that virtually everything in University level texts was unfamiliar.

Students informed us in questionnaires and discussion that they considered reading in English important to their studies, but difficult. However, their motivation to spend further precious time on English was generally low. They judged the quality of language instruction and their own competence by their ability to *speak* English fluently rather than read it. In the long term they thought that good spoken English would be an advantage, especially in their future work. From observation we noted that students expected the teacher to maintain a *dominant, informing* role in the classroom, while students regularly assumed a relatively passive role. Reading was emphatically treated as a passive, receptive process, except during the routine "interrogations" (when the teacher asks the class questions on the text and students assume non-comprehending postures because they know that if they hold out long enough the teacher will in desperation give them the answer!). None of the students interviewed had experienced working in small groups with peer teaching and learning as an alternative to the traditional lecture-style language classroom. The students finally suggested that about forty per cent of the content of their reading should be related to the subject they were studying. The remainder could be wider-ranging (e.g. social problems and remedies).

Language teachers endorsed nearly all the main points made by the students. They emphasised both reading and speaking skills and the importance of content that was relevant to students' courses. They were sympathetic to new ideas, and interesting ventures in materials design were already being made. However, most teachers were used to a teacher-dominated classroom (a common complaint was that students were so quiet and shy!) and their proposals for improvement tended to reproduce the style, techniques and sometimes the content of the students' previous language learning experience. Since this, for a host of reasons, had not been particularly successful, we doubted whether duplicating it (even with skill) would be sufficiently motivating.

Perhaps the most important issue that the language teachers raised was their own status vis à vis the other lecturers, and the status of an English language component of a University course.

At one time it was fashionable to call Language Centres "Service Stations" to the faculties of the University. (The language teachers presumably being petrol pump attendants!). Not surprisingly perhaps, the notion has generally been harmful to Language Centres and language teachers. Special purpose language teaching requires close cooperation between language and subject specialists. The best cooperation emerges when there is mutual respect. One way of achieving this is to ensure that the language teacher, like the physics teacher, has a recognised professional status. The Language Centre, likewise, should be a research as well as a teaching institution, just as any Faculty is.

The same principle applies to language programmes and examinations. To be taken seriously when there is so much competition for students' time, a course should offer the student a clear route to a mandatory examination which can be reached and passed in a minimum possible time, or taken again if failed.

UMESPP itself bore witness to the developing role of the Language Centre in the University of Malaya as a research institution, and provided a vehicle for staff to enhance their professional standing, through the work on the project and by registering for a (further) postgraduate degree. Unfortunately, the demands of the project work

were so great and so persistent that thesis-writing had to be constantly postponed. It is clear in retrospect that the question of the formal enhancement of staff status should be linked with that of staff training at the earliest planning stage, and when dedicated staff are to give a substantial slice of their life and energy to a task the principle of "enhancement with the least additional effort" should be applied.[1]

Staff in the various faculties of the University tended to think that students had both conceptual and linguistic problems in reading. The main weaknesses identified were in operating higher order cognitive strategies such as inference, extrapolation and synthesis. This is, perhaps, not surprising. We gained the firm impression that staff were doing everything possible to make sure that students were not disadvantaged for linguistic reasons (lecture handouts in Malay were normal). Moreover it is very doubtful if students had ever had much (if any) formal assistance in operating higher order cognitive strategies, certainly not as part of an advanced study skills programme in their first language. It is ironical in fact that many such programmes have been mounted around the world and first introduced to students through the medium of a *second* language. It is easy, though, to see how this has happened. Requested to mount a reading programme in a second language, the designer asks basic questions like: "For what purposes do students have to read?", "What reading strategies are appropriate?". The result is a study skills programme involving the use of a range of cognitive strategies.

A significant proportion of staff also thought that students could reach a general degree standard with little or no reading in English. This was not a situation of which they necessarily approved, but it was a useful observation for project design.

I have already observed that the subject specialist should cooperate closely with the language specialist in the construction of specific purpose language programmes. The more integrated language and subject are, the greater their cooperation will be.[2] The subject specialist's contribution may be restricted, however, if he does not have a specific and recognised proportion of his time allotted to the work and if he does not share with the language teacher a common perception of the objective and an awareness of the distinctive contribution that each can make.

In our situation, we were most fortunate to have the assistance of a large number of subject specialists, particularly in the Sciences. But any help they gave was on top of their normal work load (and therefore it ran the risk of being granted as a favour). Moreover, their linguistic attention and energy was diverted by the problem of teaching their subject in Malay — perhaps for the first time and where Malay was not their first language. Not surprisingly, they did not necessarily and initially see reading in English as quite the problem that we did.

In short, the ideal solution is one where language and subject teachers cooperate in terms of equality and mutual respect, with recognised roles to play, and shared goals.

I have dwelt at some length on the problem of staff and student attitudes and opinions in relation to programme design in order to demonstrate that a solution cannot be prescribed by just one participant in the process of education. If it is, it may well be a distortion of reality, and an unproductive one. The attitudes of all the participants need to be canvassed. Although the result will hardly ever be neat, and reconciling different kinds of evidence may be difficult, the ultimate solution is likely to have a greater chance of success because it is a response to evidence from all the participating groups.

OUR VIEW OF THE READING PROCESS AND THE LANGUAGE CLASSROOM

The conclusion to the last section may evoke the response: "That's all very well, but isn't it likely to produce a solution based upon the lowest common denominator; if the programme is all things to everybody it may lack any significant principle or impact?".

Here we admit to certain theoretical and methodological biases, which were strengthened rather than diluted by the evidence we obtained. They are as follows:

1. *Reading is an interactive, purposeful process*
   The relationship between reading and text is analogous to that between speaker and listener in conversation. The reader conducts a dialogue with the text, and is intensely *active* in the process: he has to fill in all the information gaps from his own knowledge; he predicts and interprets the writer's meaning from the clues the writer provides. In fact, to a very large extent the reader *creates* the meaning of the text. Moreover, the reader has a purpose for reading and his reading strategy will be determined by his purpose.

2. *The language classroom and the process of reading are natural contexts for the communicative use of language*

The interactive relationship between reader and text should be extended and reinforced by interaction between student and student in small-group discussion; thus there will usually be a triangular relationship between the student and his group with the text as the apex. Talk will therefore be an intrinsic element in the process of problem solving. Moreover, there should be a component designed specifically to develop selected communicative skills to support the reading process.

3. *Mature students should take the major responsibility for their own learning*
The teacher should be a catalyst, adviser and friend, and capable, like all human beings, of error. Students should rely much more on their own resources and those of their peers.

In two ways at least we intended to break new ground: in essence we would be helping students and teachers to develop an interactive perspective on both reading and the social context of learning, with a major shift of responsibility from teaching to students. We hypothesised that this shift in emphasis might — through the very different kinds of activity that would realise it — be a key element in making language learning a relatively successful experience, rather than a relative failure. Experiment would show whether we were right.

THE PILOT EXPERIMENTAL PROGRAMME

Materials: Design Parameters

The following were the main principles which finally informed the creation of the programme:

1. *A multi-dimensional approach to developing reading skills*
Within a framework of shared principles and objectives each team member was given a brief to research and develop a set of skills, and a large degree of independence in which to explore them. The main blueprints were prepared at the University of Birmingham. Four approaches emerged:

Unit 1 Reading for Meaning
This Unit would develop an awareness of the ways writers use language to organise texts above the sentence level, and offer techniques to help students to predict and interpret meaning, and to read for specific purposes.

Unit 2 Strategies for Reading
This Unit would complement the previous one. It would be task-oriented, and encourage students to use all the resources available for understanding long or difficult text, such as their own knowledge, non-linear text (graphs, diagrams etc), and their knowledge of academic text structure in Malay. Equally important, it would help students to read only as much as they needed to solve their reading task.

Unit 3 Reading Projects
This Unit would concentrate on the more specific study tasks faced by students of particular disciplines. Parallel with the rest of the programme, it would guide students from the macro-level of finding their way in a library to the micro-level of locating a relevant piece of information in a book, and thence to a multi-level activity of carrying out an independent research task. It would be planned in consultation with subject specialists.

Unit 4 Spoken Interaction
This Unit would introduce a variety of oral communicative activities which would contrast with text-based study but reinforce the notion that reading demands interactive skills. It would also answer the students' request for an opportunity to improve their spoken English.

2. *A common-core reading programme with specialist extensions*
A common-core programme is one which in content is accessible to students of all disciplines. It makes a number of important assumptions:

a. that reading skills are universal in application and not subject specific;

b. that there is, up to a certain level, a definable common-core of vocabulary, grammatical structure and text structure which is an essential basis for competent reading in the "hard-core" specialist areas; that, for example there is an important cross-disciplinary sub-technical vocabulary (e.g. words like *define, specify, relevant*);

c. that writers in different disciplines have different ways of organising their information and that students should be familiar with a cross-section of them;

d. that students, in asking for material that is relevant and interesting, do not thereby insist upon an unvaried diet of subject texts; that in any case it is impossible to satisfy everyone all the time, and a varied diet of text *and* activity is likely to prove most satisfactory;

e. that unless there is total integration between language and subject teaching, it is a difficult matter to ensure that an agreed subject-specific text is used at precisely the right moment, i.e. when a sufficient number of its presuppositions are already known to the student so that the quantity of new information is not excessive and can to a large extent be interpreted in the light of its context. In any case, as already noted, students were *not* at the level where they could cope with hard-core University text.

Approximately 75% of the material then would be common-core, taking students into fields which have maximum spin-off for interdisciplinary thinking (for example, technology, developing underdeveloped areas, human behaviour patterns).

It should be noted however that the vast majority of texts would be authentic instances of academic text at the college or University level. Texts would only be specially written for specific pedagogical purposes, for examples as stepping stones to University level text or to the understanding of a procedure.

3. *Linear and non-linear text*
The material would contain copious examples of all the resources a writer uses — in addition to words — to get his meaning across: pictures, diagrams, charts, symbols, formulae etc.

4. *Motivation*
A considerable variety of techniques would be used to help students to become interested and eager participants in their own learning. Students would work on their own, in pairs, in groups, and as a class. And each activity would offer one or more of the following as motivating features: the interest of the topic; its potential value in the student's estimation to his course; the pleasure in problem-solving; the opportunity to communicate and resolve problems in the more relaxed atmosphere of the small group; the chance to use English in a natural context without constant censure.

5. *Clarity of aims and methods*
Both students and teachers should understand the purpose of what they are doing. Instructions for a teacher's manual would be written at the same time as the materials.

THE READING PROFICIENCY TEST (1975 — 1978)

It was an important feature of the Project that it should develop a reliable evaluation instrument In design it would be kept distinct from the materials and in its present form it consists of a number of passages graded from the 600 word level (i.e. very simple) to authentic University text, on which multiple choice and cloze item questions are set. It is administered before the course begins and again at the end. The pass mark (which may also serve for exemption purposes) has been set by the *mean* achieved by a large random sample of first year English medium students.

The test was designed by Tan Soon Hock who received advice from Dr. Alan Davies of the University of Edinburgh (visiting Consultant on testing), Project colleagues and other Consultants (see below).

PRE-PILOT EXPERIMENT (FEBRUARY 1977)

The materials designers had prepared ten sample lesson types with teaching notes for each unit, according to their blueprints. There was a problem of adjustment because of the change in the main target group; indeed the Reading Projects in Science were geared to text and concepts a year ahead of the new target group. In order to experiment, the University and the Ministry of Education enabled us to select forty post-school certificate students from rural secondary schools who might have the potential to enter the University's two-year Science foundation course. These students were divided into two groups and taught two one-hour lessons a day for one month, each lesson being followed by extensive evaluation (written and discussed) by students and teacher-evaluators. At the same time, all teachers in English were gradually immersed in the experimental materials and methods, first as observers, then as evaluators, and finally as teachers. This proved a highly successful form of teacher training.

Experiment and evaluation demonstrated again that the most difficult and danger-prone period in a new programme is the beginning. With the added complication of having less mature students, we found that the beginnings presented too many novelties and complexities — in concepts, language and methods — at once. Nevertheless, it was clear that in small-group interaction, with problem-solving activities, we had found ways of liberating students from their inhibitions in what was — to all intents and purposes — a foreign

language. They responded with particular enthusiasm to Spoken Interaction which uses card games and competitions as contexts for communication.

Summary evaluations were written up and converted into revised blueprints for forty lessons per Unit.

MATERIALS PRODUCTION WORKSHOP (MARCH — APRIL 1977)

The objective of this major event, lasting six weeks, was to prepare, evaluate and revise one hundred and sixty lessons covering the four Units. The workshop brought together all the English Language Teachers, the consultancy group from Britain, consisting of Mr. T.F. Johns (University of Birmingham), Dr. P.J. Roe (University of Birmingham and The British Council), Mr. A.P.R. Howatt (University of Edinburgh) and Professor J. Sinclair; a design team (designer Mr. V. Chin and two illustrators); a Malay language consultant; a clerk, four typists and one machine operator. Science Consultants were available when needed.

Each Unit was written by a team consisting of a Project team member as leader, three teachers and a U.K. Consultant.

After orientation and discussion of the pre-pilot experience (including watching videotaped sequences of learning), each writer was given a brief for the lesson or group of lessons he was to write. After being drafted, the lesson was checked by the team leader and typed up; it was then evaluated by the writer, a team leader and a consultant, and subsequently revised and re-typed. The teacher's notes were then written. When all the material had been written and had reached second draft form, it was all re-evaluated and reviewed.

After the workshop, consultants and teachers dispersed, leaving the Project and design personnel as a *de facto* publishing unit with the University of Malaya Press to make final revisions and rush the material into print.

A significant feature of the Project was that the pilot material put in the hands of the students should be up to professional design and printing standards. Problems with sophisticated lay-out and continuous proof-reading absorbed much project team time for the rest of the year; it was clear that a much stronger editorial team would be needed when the final version was prepared. Nevertheless, the first phase was printed and ready for teaching in mid-June 1977.

THE PILOT EXPERIMENT (JUNE 1977 — FEBRUARY 1978)

This lasted for one academic year and followed a similar progression to the pre-pilot, except that the evaluation questionnaires had to be radically shortened because time was now at a premium. Meanwhile, the material was also evaluated externally by specialists at the British Council and the Universities of Birmingham and Edinburgh. Experimental teaching was carried out with pre-Science students, on a one-year course; Science Foundation Centre students beginning a pre-University two-year course; and first year Economics students. Because we had written far more material than there was time to teach, we had to distribute lessons around classes. Thus, no class went through the entire programme.

EVALUATION AND REVISION WORKSHOP (MARCH 1978)

The programme succeeded best — not surprisingly — where the conditions were appropriate and the students were closest in age and experience to our pre-pilot group. There, English language had precisely the same status as other subjects (persistent failure in Semester Examinations could oblige a student to leave the University); classrooms were custom-furnished to our requirements and did not need rearranging at the beginning or end of lessons. The students, averaging seventeen years in age, with a reasonably successful academic record behind them, were generally highly motivated and keen to seize the opportunity of a University education two years earlier than normal. Though differing widely in English language ability (all of them had scored well below the mean on the Reading Proficiency Test), most of them blossomed in language competence before our eyes.

At the other extreme, where students had had a relatively unsuccessful academic experience, where English was voluntary and time-tabled in the gaps left by other subjects, where examinations in English were of no significance to their University career, and classrooms had to be converted from lecture halls at the beginning of each lesson, the experiment was a relative failure.

A quantitative evaluation, comparing results on pre- and post-tests has not yet been made available. In any case it should wait until a group of students has completed the full programme.

A criticism of the material was that it still presented too many initial obstacles and insufficient aids to surmount them. Our detailed instructions, for example, were hurdles rather than helps. The Revision Workshop, lasting three weeks, which brought together teachers and consultants again (including Mr. C. Kennedy, University of Birmingham), prepared a completely

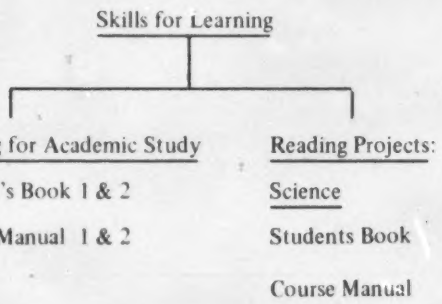
new introduction to provide an easy and successful transition from old to new learning styles, methods and responsibilities. Furthermore, the material now explicitly builds up the students' sub-technical vocabulary in each lesson.

Older students reacted less enthusiastically to any content or activity remotely juvenile, and the material has been sifted to eliminate such features.

Four separate Units proved cumbersome to handle, and inevitably there were overlaps. Internal and external evaluation recommended an integration of the three common-core Units, leaving Reading Projects in specific disciplines as a separate but parallel component.

The common-core component now culiminates in a "Finale" which asks students to orchestrate all the reading, study, and oral skills they have learned in an interdisciplinary project. The complete programme now lasts two years at the rate of four lessons per week.

The revised programme is being published by the University of Malaya in 1979 for sale within Malaysia. An international edition is being prepared for publication in 1980 by Thomas Nelson. The programme is organised as follows:



CONCLUSIONS

The Project demonstrated that, as in other fields, there are no instant panaceas or solutions in designing materials and methods for language learning programmes. The "right" programme emerges organically from the interaction between all the participants — the subject specialist, the language teacher, the students, and the experimental materials; from monitoring and evaluating that interaction and from making modifications and revisions in response to it. Moreover, since situations can change, and quite rapidly, all those processes are continuous.

It may well be wondered whether the observations and results of such a Project can be transposed and applied to another group of learners, or whether similar in-depth research has to be mounted with each new group. It is very likely that the Project has identified problems, needs and wants which are quite general, at least to students doing advanced academic study-reading in a second language. Moreover the solutions proposed may well be relevant to other groups of learners, especially since the content is not strongly culture-bound.

On the other hand, since no two situations are exactly alike, small differences — in teaching/learning styles, readiness to adapt, levels of linguistic competence, attitudes to content and so on — may have a significant impact. Intuition alone will not always reliably detect these differences and an investigation or experiment may be the right answer. Moreover, social change and developments in learning and linguistic theory bring with them both a need and a readiness to experiment and adapt. Finally, people sometimes wish to identify and solve their own problems, believing that trial (and error) is the best way to create successful programmes. So, for some groups, UMESPP may have provided answers to all or some of their current questions; for others it may have suggested questions to ask, solutions to apply and features to avoid. Whatever the case, it is likely to have a substantial influence, and I would like to record here my gratitude to all its sponsors, especially the Vice-Chancellor of the University of Malaya, the Director of its Language Centre and my colleagues in Malaysia, Birmingham and Edinburgh for the privilege of sharing with them in the work.

Notes and References

[1] A new M.A. degree in Applied English Linguistics to be offered by the University of Birmingham proposes a "sandwich" programme combining study at Birmingham and field work in the student's own country.

[2] For one approach to this matter see Johns T.F. and Dudley-Evans A, 1978, "Team-teaching of subject-specific English to Overseas Postgraduate Students", *University of Birmingham Teaching News 5.*

E.L.T. Course Preparation and Production at Addis Ababa University

Neil Mortimer

INTRODUCTION

Most of the excitement about English Language Teaching over the past few years has been about "syllabus design", but for members of the English Language Unit at Addis Ababa University in April 1977, faced with the task of designing materials for over 3,000 freshmen, which could be handled by seven full-time staff, six graduate assistants, and a handful of part-timers, the most serious and pressing question was "How?". Inspired by the self-instructional materials produced at the Open University,[1] members of the Unit decided to write an answer-keyed workbook for students in the Faculty of Arts, another for students in the Faculty of Science, a listening comprehension/note-taking component for both groups, and two specialised courses for Technical and Business Diploma Students. The considerations and procedures used to design and produce these materials, as well as a brief observation, appear below.

STUDENTS' ENGLISH REQUIREMENTS

Although English is taught as a subject from Grade 3 in the Ethiopian elementary school and is the medium of instruction in the secondary school, students entering the University vary enormously in their command of the language: a few can write a coherent paragraph; some can frame complicated question patterns; others cannot articulate three thoughts around a single point; a few cannot even ask for a statement to be repeated. All need English for academic purposes to complete their studies at the University.

This being so, the Language Unit sent a questionnaire to other departments and faculties to find out the type, level and frequency of language skills required from their students; sample handouts and past examination papers were also collected and examined. From the information received the following (abridged) profiles emerged:

First Year Arts Students would be required to:

1. Recognize indicators in discourse for
   — introducing
   — linking
   — developing
   — emphasizing
   — concluding.
2. Take detailed notes from lectures on history, geography, statistics, and Marxist Thought.
3. Skim to obtain the gist of a text.
4. Scan to locate specific information.
5. Read for detail and be able to distinguish a
   — principle from a fact
   — fact from an opinion
   — statement from an example.
6. Write paragraphs to answer essay-type examination questions.

First Year Science Students would be required to:

1. As for Arts Students.
2. Convert information presented in graphs, diagrams and tables into speech and writing.
3. Construct diagrams, tables and graphs from information given in spoken and written forms.
4. Evaluate evidence and organize information to classify groups and categories.
5. As for Arts Students.
6. As for Arts Students.
7. Describe a process by separating it from its various stages.
8. Record the results of an experiment.
9. Take detailed notes from lectures on chemistry, biology, maths, physics, and statistics.
10. Skim and scan a text.

BEGINNING LEVEL AND ORGANISATION OF MATERIALS

Having pinpointed these objectives, the next step was to determine our starting-point — the most crucial (and, often, controversial) aspect of course design: for if materials do not begin at an appropriate level, boredom or despair sets in. And consecutive units fall short by being either too easy or too difficult. As every student comes into a course in a different state of preparation, it is impossible to provide a suitable starting-point for every participant. All that can be done is to write-test-revise-retest so as to arrive at an appropriate start for the majority. This is easier said than done if, as in our case, several academics are

writing and testing the materials: reaching a consensus takes time, what one interprets as suitable another finds unsuitable for numerous reasons, which must be enumerated and discussed. Time goes on. And content, sequence, and method of organising units have yet to be decided.

To understand the organisational options available to us in 1977 it is necessary to look at recent developments in syllabus design. Over the past few years, structural syllabuses, which use grammatical structures as units of organisation, have been supplanted by alternative arrangements in a number of E.S.P. (English for Specific Purposes) Coursebooks. Instead of covering one or two grammatical structures in a lesson, the teacher is expected to introduce a *notion* — e.g. "amount", a *function* — e.g. "declining an invitation", a *topic* — e.g. "insurance", or a *setting* — e.g. "an airport". These are currently "in fashion", and no doubt, in the hands of an experienced language teacher instructing certain types of learners, e.g. intermediate following a short intensive course for occupational purposes, they are just as effective (if not more so) — and more relevant — than the traditional syllabus, which has in many instances presented certain structures that students would seldom, if ever, use. But for non-native speakers teaching English to students whose command of English is, in many cases, elementary, whose experience and understanding of "insurance", "airports" and such like is limited or non-existent, it would be folly to base a course required for academic purposes on these, or familiar rural topics and settings. So knowing our prospective students' language habits — e.g. not speaking English outside the classroom — we opted for a structural approach incorporating notions like "size" and "amount", notions that language teachers have been teaching for years, without making them the focal point.

In practical terms, language materials designed for use in the classroom are only as effective as the teacher using them. In the hands of an informed, experienced teacher, a text provides a skeleton: if structures, functions, or notions are in the wrong order for particular students with particular first language interference, they can be rearranged so that the most appropriate ones are taught before those that appear in the first unit or chapter. But in the hands of a poorly trained novice, who does not understand the concept of L1 interference or preliminaries, a text becomes a "Bible" that must be followed word for word. For such teachers, organisation assumes a greater importance, and course writers must design their teachers' notes and coursebooks accordingly.

So much for teachers at this point. How important is the organisation of self-instructional materials? What should be considered? In attempting to answer these questions, before designing our workbooks, several observations were made:

1. Materials must stimulate and not be dull.
2. Repetition must be used to reinforce.
3. Connections and divisions must be explicit.
4. Instructions would need to be simple and clear.
5. Examples would have to be comprehensive.
6. Layout would be crucial as a means to understanding.

Moreover, when the student has to work "on his own" between weekly tutorials, organisation is far more important than when there is a teacher on the spot to illuminate the text and correct misconceptions. Self-instructional materials, as far as possible, have to do the job that the teacher normally does: introduce, explain, exemplify before providing exercises for practice. This means that the writer has to anticipate what will cause difficulty, what will need elaboration, what will command attention — in short, what will teach. After this, reinforcement must fix what has been taught so the learner can use it spontaneously in appropriate situations. Here we come to the crux of organisation: purpose. If materials are designed to teach someone to write an essay, the emphasis is different from, say, a course on notetaking. Similarities and connections exist of course, as between writing a business report and a formal letter, but stress, proportion and organisational technique are different. To determine the most effective skeleton for specific self-instructional materials, various arrangements — and approaches — must be tried and tested.

COURSE WRITING ARRANGEMENTS

But first they must be written. And the division of work amongst academics who have agreed to collaborate on producing a course should not be taken lightly, for personalities, habits of work, and abilities either help or hinder production according to the combination. For instance, let us consider a situation in which three academics agree to write a thirty unit coursebook, with each doing ten units. After agreeing on content and sequence, they start writing. The one working on units 11-20 finishes in six weeks and shows them to his colleague who is writing units 1-10, but who, unfortunately, has only completed the first draft of units 1-3, as he is suffering from writer's blight: "Er-ah". He immediately feels threatened by the

fact that units 11-20 are finished because he knows that they cannot be meaningfully tested until his are finished, as units 1-10 are *supposed* to contain the rudiments leading to unit 11. What does he do? He discusses the difficulty with the other collaborator who has just finished unit 25. They decide, for indefensible reasons, to ask their colleague to rewrite some of his units on the grounds that they are not suitable. He refuses and claims that until his units have been tried it is impossible to establish whether they are suitable or not. He fumes. He sees the Head of the Department and tells him that he cannot test his units because the other two are dragging their feet. A meeting is called. Accusations are met by counter-attack; units 11-20 are pulled to pieces by the other collaborators. The academic who wrote them storms out of the meeting in disgust, after telling the others that they can write all the units themselves. The Head of the Department tries to restore harmony, but pride has been pricked, intellect abused, production set back. Nor is this the end of it: future departmental meetings will more than likely be marked by vituperation and bickering: sides will be formed, work delayed. Items on the agenda will not be dealt with: more meetings will be called, leaving no time for planning courses — much less writing them. It need hardly be said that all this could have been avoided by assigning units 1-10 to the fast worker in the first place.

Fortunately, our time was not wasted in this manner as we divided the work according to individual habits of work, inclination, and ability; nor did we have more than two people writing a particular course: two whose methods of work complemented each other, whose common interest was to improve the materials, whose minds, interested in kindred topics, came together. We did, however, find that some academics worked better on their own: they were more productive when they did not have to accommodate themselves to another's fancies and foibles. And although this is universal, it does have significance for administrators forming a course production team, for output and quality do not depend so much on numbers as on the distribution of personalities within the group to perform specific tasks, on talent, experience, insight, and feelings of adequacy.

But to continue on this theme is beyond my present purpose. It only remains to point out that

an excellent lecturer is not necessarily a first-class writer (and vice versa) as different forms of dramatic construction are involved, so it would be a serious, and costly, mistake for an administrator to assume that he only had to gather the best lecturers to write course materials. For all he would be assured of is endless meetings, cackle, and "squawks", followed by a wad of neatly-typed minutes. No. Good materials, and therefore workable arrangements, usually come out of a happy set of circumstances that throws talented individuals, who reinforce each other, together for a specific task. And tailor-made materials cannot be ordered by a Monday-morning directive, for they only emerge after being written in a workmanlike manner and thoroughly tested by those who have served their apprenticeship.

DEVELOPMENTAL TESTING

Logically, draft materials designed for incoming freshmen should be tested on Grade 12 students just before graduation as levels of ability change from year to year; unfortunately, because of scheduling and transportation difficulties, it was not possible for us to test in the high schools. We had to rely on the goodwill and tolerance of freshmen extension students* who were older and more mature, but whose level of English — broadly defined — fell between elementary and intermediate, the same as that of day students, with specific language skills partly developed or neglected. This created difficulties as we had to try to include something meaningful for every student, e.g. relevant vocabulary items related to other freshman courses, so that those who had already mastered certain structures would not be bored, but stimulated to greater effort and the next unit; next we had to select and arrive at an appropriate sequence of structures extracted from an error analysis of students' mistakes; and finally we had to find a suitable layout — all this took time.

Having sufficient time for developmental testing cannot be over emphasized, yet ours was insufficient — 5 months — to plan, write, test, and revise. The printer's deadline overrode everything. This was unfortunate (to put it mildly), but necessary if students were to have materials when they arrived in October. And because of this lack of time, we were only able to try three types of layout, which left various combinations and other approaches, that might have been more effective, untried. Moreover, the results of those used were not conclusive, forcing us to rely largely on intuition.

*Young adults studying in the evenings at A.A.U. for a degree or diploma.

This is not to suggest that intuition is less valuable than the place of a decimal point when analysing the effectiveness of language teaching materials; on the contrary, reliance on .005 to prove anything about language learning — or teaching — is absurd, as many linguists and language teachers have recently "discovered". For past attempts to measure teaching effectiveness and learning capacity have been largely unsatisfactory despite the confident pretensions, with the result that linguists and teachers have gone back to the study — or into the classroom — to think again. And what has emerged is valuable: firstly, an element of rapport now exists between language teachers and linguists — teachers who formerly thought of linguists as pedants trying to describe and measure the immensurable, through small, blurred notations; and linguists who formerly saw language teachers as worn-out zombies controlled by petty headmasters, dictated to by truculent pupils, and at the mercy of uninformed parents. Secondly, articles written by applied linguists today are, with a few exceptions, relevant, well-written in clear, precise, everyday terms to communicate ideas and results to the non-specialist and the specialist inside and outside the classroom; they have also developed significant instruments [2] for profiling learners' language requirements. Finally a number of language teachers are providing useful feed-back to linguists on the value and practical difficulties inherent in new methods and approaches, a lot of which is "instinctive", coming from years of teaching experience.

But it would be unfair if I gave the impression that our testing programme, with all its shortcomings, depended on hunches alone. It did not. Exercises were planned, written and marked; answers tabulated and analysed for significance; material rewritten and tested again. And despite the lack of time, each unit was tried in different sequences with four separate groups. This enabled us to obtain a reasonably effective sequence after shuffling different types of exercises to determine the most suitable order. We finally decided on:

Reading Passage — related to other freshman courses

Vocabulary Exercises — using words in the passage as a starting-point

Reading Comprehension Exercises — based on each passage

Structure and Usage Exercises — emphasizing meaningful production

Writing Exercises — leading to paragraph construction.

Given the wide range of ability to think in English within each group, exercises and explanations had to be prepared at different levels to find an "average"; this necessary, but time-consuming, process took reams of paper, hundreds of stencils, and hours on the typewriter.

What I have been describing does not of course imply that developmental testing is synonymous with drudgery, nor does it suggest that good materials are guaranteed by adequate time. Rather it shows that testing is an arduous task with few short cuts, that the numerous activities — and decisions — involved in planning, writing, and testing must be synchronized, that imagination is necessary for interpreting results. And what supports this view is that the best — I mean, the most fitting — English language materials have been designed by imaginative individuals who had the opportunity to test successive drafts until they came up with an effective combination of structures, functions, or notions, exercises, and level for particular students; they also had efficient administrative back up. This presupposes adequate time and money for forward planning: obtaining supplies of paper, ink and stencils well in advance, arranging for academics involved in preparing the materials to have no teaching duties other than for testing purposes, scheduling control groups ahead of time, and engaging competent auxiliary staff to type and duplicate, so that hours — no weeks! — are not wasted in proofreading hundreds of stencils again and again, nor in sorting out sheets that have either been printed or stapled upside-down.

Alternatively, many institutions now hire outside professionals to evaluate texts and, if necessary, design and test new materials — sometimes known as a package deal — or have formed a permanent team of their own. Both have merits and drawbacks. Outside consultants need time to adapt and become acquainted with different cultures: habits of work, attitudes towards time and efficiency, academic standards, existing testing procedures, the relevance of paper qualifications and expected results to name but a few. Until these are understood, a relevant testing programme cannot be implemented, and if the testing specialist does not speak the language, he is dependent to a large extent on a translator's skill and the perspicacity of fellow countrymen who speak the language for his "understanding". This robs him of his most important faculty: a feel, an instantaneous grasp of whether draft materials will roughly fit or not. On the other hand, if they remain on their toes, outsiders are not hampered so much by internecine feuds between individuals and departments, and they have effective back-up services in their own countries to supply up-to-date articles on new testing instruments.

The English Language Unit at Addis Ababa University provides an example of the second alternative: a sector within an institution established to design, test, and evaluate English language materials, as well as to train Ethiopian staff to prepare E.S.P. texts and tapes, and to teach small groups of students who require English for academic and occupational purposes. One of the drawbacks of this type of establishment is that it can, if one is not careful, grow so rapidly that it loses its original shape and purpose and becomes an octopus requiring funds for this, and staff for that, simply because requests for specific materials come in from every quarter, and the intake of students increases from year to year. And each set of materials needs an extensive testing programme, which puts an intolerable strain on personnel and duplicators that are already working around the clock: for example, one freshman course has over 2,000 students who do not have textbooks, so handouts have to be duplicated and distributed every week. If one handout contains 4 sheets, 8,000 sheets have to be printed for one course; multiply this by four for other freshman courses and one begins to see why the listening components for our two courses were not duplicated in time to be tested during the 1977-'78 academic year, and why separate printing equipment is needed to test draft materials.

This brings us to another drawback: equipment and capital. Modern printing equipment is expensive, and an institution that decides to print its own materials for a large number of students has to invest several thousand pounds initially in a press, collator, and binder. It also has to arrange — beforehand — for technicians to be trained to operate and maintain them, for machinery, from a "simple" tape recorder to an offset press, needs regular maintenance: if it does not get it, it seizes up, collects dust, and serves no one — except the company that sold it! And it is no exaggeration to say that millions of pounds worth of equipment — radios, tape recorders, overhead projectors, cameras, film projectors, and scientific apparatus — remain idle in numerous countries, in schools, colleges, institutes, universities, for want of a technician with the know-how to fix them: in many instances all they need is for a screw to be turned, a belt put on, or a valve replaced. This is waste on a grand scale — waste that no institution can afford, and I mention it in passing for initial expenditure is only part of the cost of printing: maintenance, training, paper and ink soon mount, which should suggest to the conscientious administrator that a

cost analysis of commercial printing charges and the costs involved in running a printing establishment should be made before rushing out to tie up capital on printing equipment.

Finally, although a permanent establishment provides on-the-spot services throughout the year, the money needed to run it usually means less for other departments, so priorities must be determined beforehand. And as I mentioned earlier, original purposes can change with an influx of students: more teachers are required which means — unless additional academics are hired — less time for preparing and testing materials. Over the last year, the intake of freshmen at A.A.U. has jumped from 3,000 to 6,000. This has certainly put a strain on University staff, some of whom are lecturing 15 hours a week while attempting to prepare materials. Although a few writers can add a sentence or two between lectures, the majority of academic writers require long, uninterrupted stretches to think and write. Under the present set-up, teaching and materials suffer, for switching from one activity to the other does not occur when one steps into the lecture hall or sits down at the desk to write: thoughts continue to nag, connections appear, flashes of inspiration occasionally strike; or the mind ponders over why a particular student failed to grasp an important point, why the end of the lecture seemed to convey more than the beginning, why two students walked out after twenty minutes, and so on. To help ensure that students get the benefit of good materials and the lecturer's full attention, academics should not be expected to write and lecture in the same semester: a rotation system should be established to give staff the opportunity to do both jobs well. Admittedly, this will mean additional funds for salaries, but it will save money in the long run by providing materials that do not need to be rewritten immediately after publication.

OBSERVATION

Reflecting on the materials we produced in 1977, not by themselves but as part of the freshman programme, we did not achieve what was intended. No doubt we taught some students, no doubt we reached some of our objectives, but our materials could have been more relevant and effective. Reading passages, for instance, could have been more closely linked with other freshman courses; certain connections and overtones could have been glossed; numerous answers could have been expanded, and all units could have been tied with more lucid threads.

Undoubtedly, some of these shortcomings would have been spotted (and corrected) had there been more time; others would have slipped by and come to light (as they did) in students' questions and tutors' queries. Ideally, materials need to be viewed and revised months after they have been written and tested, when the authors can see them with a fresh eye — before they are published. And if they can be tested again during this period by colleagues so much the better, for it is cheaper to have pages re-typed than to pay for new photographic plates and re-binding. Perhaps ideal conditions for course production do not exist, but if they do, are materials prepared without economic constraints, without time pressures, without psychological and logistical difficulties vastly superior? It is tempting to answer with an instinctive "Yes". But I wonder. How many writers, for instance, write better under pressure, knowing that an article, a final chapter, or a report has to be submitted by the end of the week: or to put it another way, how many writers procrastinate until the "last minute"? Thousands. The truth of the matter is that we know next to nothing about what brings out the best in a writer preparing course materials; nor are we likely to learn unless there is a more meaningful exchange of ideas, working arrangements, and results; in other words, less statistical information and more insight, fewer articles aimed at professional colleagues and more aimed at saying something useful, less value placed on whether a comma or a semicolon should have been used and more on content — an enormous non-sequitur, associations, principles, ideas. Until this happens the chances of a glimmer are slim.

But to obtain an inkling into the sort of light that should be shone, the interested reader should consult H.G. Widdowson's article, "EST in Theory and Practice"[3] where he says: "I cannot help feeling, outrageous though it may seem, that literary critics have come closer than linguists to an understanding of the communicative function of language and the ways in which discourse is made. Their approach to language acknowledges at least that meanings in discourse are to be worked out by active interpretation and are not a simple function of correlation, that this interpreting ability depends on more than just a knowledge of pre-formulated rules". Here, Dr. Widdowson has managed to flash his torch on the application and transfer of approaches used in another discipline to throw light on an area of darkness in language theory — i.e. how people use language. And I suspect that additional, significant advances in ELT theory and practice will come from individuals who, seeking obscure, yet meaningful, connections and applications, look outside the narrow confines of a single discipline, for knowledge knows no boundaries.

And it is for this reason that specialist journals should reduce the jargon and communicate with the non-specialist, be he a chemist, linguist, biologist, language teacher, physicist, or whatever. For it would be presumptuous to imagine that a specialist could not understand an article free from jargon, and he could still use it as a short cut to understanding when conversing with fellow specialists at conferences, of which there is no shortage.

Doubtless there is a demand for conferences, but I sometimes wonder if a more purposive exchange of ideas and know-how would not come from a working visit of four or five determined thinkers from different institutions interested in overcoming similar difficulties or in solving specific problems. By this I am not suggesting that conferences should be abolished, or that nothing ever comes out of them. My point is this: like a course production team, the mixture of personalities attending a conference determines whether it is just another enlivening occasion or whether *something* comes out of it other than a mass of transcripted speeches that do not enlighten — and rarely enliven anyone other than the speakers, who are familiar faces to the rest of the participants; moreover, many thinkers shun the conference-trail so that their work will not be interrupted, but some of them would probably be willing to visit and receive other specialists from other Universities, institutes, and such like who are searching for similar connections and possible answers to specific questions.

You may say, why go into all that? Well, if we had had, or known about, the Munby Model, for instance, in 1977, our materials would have been more specifically tailored to freshman students' language needs. And now that such an instrument has been developed it will be used to design new materials and, with slight modification, to evaluate existing ELT texts. It also provides a starting-point from which related instruments, e.g. to match language needs to specific teaching arrangements, can be developed, and these will be useful to Colleges of Education and to teachers during their probationary year. Clearly, work of this kind is not likely to be disseminated at a conference until it has been more or less finalized, and although there are excellent research bulletins that describe current research, who has the time, or inclination, to read them when one is engrossed in work? They are usually read *after* someone has just completed a study, and it is not uncommon to find that several other people in other countries have been following the same path to similar conclusions. To prevent duplicated, or misplaced, effort and to establish closer working links, it would be better for University departments to write to their counterparts in other countries listing "work in progress", for letters tend to be read more readily than guides and bulletins. And anyone who doubts that research is being duplicated on a vast scale, particularly in ESP Course Design — in spite of the numerous research guides, bulletins, and news sheets — should take the time to consult them, which shows that we should not be complacent about current practices for exchanging information, but should seek ways to improve them and turn information into knowledge, and knowledge into application.

And to assist in this exercise, mannerisms of scholarship: bountiful, irrelevant footnotes, appendices that do not append, notes that do not clarify, references that do not refer, should be replaced in learned journals by thought in the form of ideas, not by more "well-documented facts", for although we have been taught by pedantic educationalists that there is only *one way* new knowledge can be established and transmitted, the facts of the matter are otherwise, for scholarship, at its highest, is a form of creation, and discovery rarely comes from following method; on the contrary, it usually arises out of stumbling upon — after searching for — connections outside of "established procedures" and boundaries.

This pseudo scholarship has had a baleful influence on textbooks: methods have been slavishly followed: thought stultified by the rhythmic sway of exercise followed by exercise, designed, one presumes, to send pupils and students to sleep, or at best, to keep them quiet. Time has been wasted. Nor should we foolishly think that improvement will come overnight. How could it? There are too many vested interests in the textbook industry — Big Business with its own particular brand of "scholarship". And it is for this reason that English language teachers and linguists have started preparing their own materials, for they cannot find one English language text on the market that is entirely suitable for their students. Usually, several parts of different books are needed to put together a course, which still may not be as suitable as tailor-made materials.

We found this with our Technical and Business Language Courses. The first semester, we were forced, through lack of time, to cannibalize bits from here, there, and everywhere. We tried to marry up tapes from one course with exercises from another, films with written exercises of our own, but they were not as effective as they could have been, because, here again, time is needed to select,

match and join. By the second semester, we were better organized: we obtained "The Bellcrest Story", a series of business films and accompanying tapes, that presented relevant structures and vocabulary items that our students understood and enjoyed. So, given sufficient time, it is possible to construct appropriate language courses from existing materials and these are far cheaper and quicker than designing one's own, but the fundamental question that has to be answered before deciding on existing texts or tailor-made ones is: materials — information, knowledge — for what?

Notes and References

[1] The Open University in Britain provides a home study facility to adults who wish to obtain a degree or higher education through printed correspondence materials, television and radio programmes, set books, reader, tape cassettes and records, home experiment kits, correspondence tutors, face-to-face tutors, and counsellors.

[2] To gauge the significance, see J.L. Munby, *Designing A Processing Model for Specifying Communicative Competence In A Foreign Language*, Cambridge University Press, 1978.

[3] In *English for Academic Study with special reference to Science and Technology*, English-Teaching Information Centre, The British Council, 1975, pp. 3-10.

Towards a Staff Development Programme in South East Asia

L.R.B. Elton and **Gaye Manwaring**

WHY STAFF DEVELOPMENT?

Over the past twenty years, higher education all over the world has been in a state of rapid change. In Britain this change started with the establishment of the Colleges of Advanced Technology in the late 1950's and was accelerated through the Robbins Report and the creation of the New and the Technological Universities in the 1960's. There then came the Open University, the Council for National Academic Awards and the Polytechnics, and most recently the re-organisation of the Colleges of Education. During the same period the emerging countries of the Commonwealth established their own Universities, partly on the basis of existing institutions and partly by new creations, and adapted them to their own developing and rapidly changing needs.

The rapidity of the change has meant that teachers, brought up under conditions which had developed slowly and through long-standing traditions, suddenly found themselves working under very different conditions and were indeed being asked to play their part in adapting their institutions to these new conditions. British Universities, as we knew them in the 1950's. had developed through an almost Darwinian process by which that which was successful survived, without there being any need for deliberate academic planning and development. This process led, to give but one instance, to the highly and at the time rightly acclaimed specialist honours degree course. However, in the past twenty years societal changes have been too rapid to allow Universities to respond to them through a process as haphazard and slow as the survival of the fittest. What is required is deliberate planning, which in turn needs knowledge, skills and attitudes which are in many ways new for the University profession.

The obvious answer to this need lies in staff training and development, and this has indeed been recognised in institutions of higher education in Britain, whether they be Universities, Polytechnics or Colleges of Education. Increasingly, they have established staff development units and staff development programmes, and while even ten years ago the idea that a teacher in higher education might profit from some training would have been treated with incredulity and derision, today the training and development of new staff is an accepted part of the scene and the in-service training of established staff is beginning to be accepted. There is now a definite possibility that the way British higher education will develop in the 1980's and 1990's will be influenced by the deliberate thinking of many individual teachers who have seriously and knowledgeably assessed both the value of tradition and the need for innovation.

A significant aspect of higher education today in Britain and in the Commonwealth is that they both stem from British higher education in the 1950's. However, they are both very different from it and they have developed from it in very different ways. At the same time, they also contain definite similarities. Institutions of higher education have strong international links and these provide a means by which individual institutions the world over constantly adapt to each other. This tension between adaptation to institutions elsewhere and adaptation to changing local conditions is a source of strength, if it is used to advantage, but too often it has proved a source of weakness when the balance between the two forces which create the tension has been upset. In that case it leads either to institutions which slavishly imitate the out-of-date and alien traditions of others or, on the other hand, to institutions which, jettisoning what is good in our common heritage, succumb to the immediate needs of their local environment. It will not surprise the reader to be told that in order for an institution to be able to maintain this delicate balance of forces which influence it, it must, in our opinion, have staff who can knowledgeably assess both the value of tradition and the need for innovation, and that this requires staff training and development.

WHAT IS STAFF DEVELOPMENT?

We have made the case for staff development as something that is needed in higher education now, but this is largely because it is such a new concept there. In fact it is something that is needed in all organisations and at all times. It is a broad concept which covers the systematic identification of the present and anticipated needs of an organisation and its members, and the development of programmes and activities to satisfy these needs. It is concerned with all aspects of a person's work — in the case of a lecturer in an institution of higher education with research, teaching, administration, outside consultancies etc.

It is the teaching side which is of particular interest to us and experience also indicates that a training programme in teaching is a good starting point for a more general development programme. This is plausible, for it is through his teaching that a lecturer interacts most with others in his institution. Thus, if he is more knowledgeable, better skilled and more favourable in his attitudes towards teaching, then the institution should benefit in terms of results and the lecturer in terms of job satisfaction.

If we now concentrate on the teaching aspect of staff development, then we would say that our main aim is to bring lecturers to develop the same professional attitude to their teaching which they normally hold towards their research. This will be particularly important in the kind of rapidly changing situation, outlined above, when new situations and problems constantly arise and have to be appraised, although staff development is of course just as much concerned with the critical re-appraisal of established teaching.

Within an institution, we have found that a useful model for staff development is one in which we have three kinds of people who interact with each other:

1. Staff in a staff development unit. These are specialists in e.g. educational psychology or educational technology, and they can offer a course and consultancy service to departments and their staff. They may be backed up by support staff, such as for instance media specialists.

2. Certain senior staff in departments. These are experienced and thoughtful lecturers who have decided to put their creative powers at least as much towards teaching as towards research, if not more. For themselves they look to staff development for new ideas and methods in teaching; but they also assist in the staff development of others, in general more junior staff.

3. Others, in general more junior staff. They benefit from the professional help and advice given by members of the other two groups and they in particular rely on the senior

departmental colleagues mentioned above for educational matters which relate to their subject and students, while staff in the staff development unit must assist them in the improvement of their teaching skills and a better understanding of general educational concerns.

All three groups in this model would normally interact with each other mutually and learn from each other.

This was the background of our thinking when a year ago we were invited to initiate a staff development programme at Universiti Sains Malaysia, and the rest of this paper will describe our activities there in 1978 and our plans for 1979. The programme was based on our experience in two very different types of institution in Great Britain, and we expected that while this experience would be relevant there would also be problems that would be quite new to us. So we went there to learn as well as to teach and we believe that we did indeed do both.

A STAFF DEVELOPMENT PROGRAMME*

The programme to be described was based at the Universiti Sains Malaysia (USM), Penang, where we spent six weeks during July — August 1978. Our immediate aim was to conduct a series of staff training and development activities, but throughout our visit we never lost sight of the fact that the eventual aim of our work was to establish staff training and development programmes based on local people and resources. With this in mind, we also progressively adapted our programme to the needs and concerns of the University, as these became apparent to us.

USM has the usual teaching and learning problems with which we are familiar in Britain. In addition there are problems caused by three special features:

(a) The recent increase in student numbers from rural areas has led to an unusually wide range of ability and achievement in the student body.

(b) The transfer of the official teaching language from English to Bahasa Malaysia has led to difficulties for both staff and students, some of whom are more conversant in English and others in Bahasa Malaysia. Also many of the textbooks are in English, whilst lecturers' handouts are in Bahasa Malaysia.

(c) There is a very substantial off-campus programme which offers correspondence courses in nearly all the subjects taught at the University, to students all over Malaysia. Study centres for Science — but not for other subjects — are located in a number of towns and students of all subjects spend short intensive periods at USM.

We concluded that the special features referred to above called for a substantial effort in teaching, well beyond anything needed in most British Universities, and that an important way of assisting with the solution of the resulting problems which should be explored, was to provide a portion of the teaching through individualized learning methods and materials. With that in mind, we left samples of such materials with the Educational Technology Unit.

We were fortunate in being able to establish contacts with Chulalongkorn University, Bangkok, through two staff from that University who attended the above activities, and with the two Universities in Singapore, which one of us (L R B E) visited during the last week in August.

Our main activities at USM were as follows:

Workshop 1 20.7.78
"Towards a Training of University Teachers"
This was an exploratory discussion session, attended by the Vice-Chancellor, both Deputy Vice-Chancellors, all Deans or their representatives. We presented several examples of staff development activities in British institutions, and the relevance of these to the needs of USM was discussed. This gave us a first and valuable insight into the specific problems of USM.

Workshop 2 Part A: 21.7.78, Part B: 26-29.7.78, Part C: 4.8.78
"Staff development in Higher Education"
This workshop was designed for senior academic staff, who might in the future help as tutors in a staff training programme. We used Part A in order to explain our plans for the residential workshop, which formed Part B and is described in *Workshop 3* below.

We suggested that senior staff had two roles to fulfil in Part B:

(a) to participate fully, in the same way as the junior staff in *Workshop 3*;

*The remainder of this paper was reported at the Conference of the European Association for Research and Development in Higher Education, in Klagenfurt, Austria, in January 1979, and is being published in the Conference Proceedings, *Higher Education: A field of study* (ed. E.A.V. Trotsenburg). It is reprinted here with permission, © 1979 Verlag Peter Lang, Frankfurt am Main.

(b) to be critically aware of what was happening:
- — how we were teaching;
- — how they and junior staff were learning;
- — attitude changes among participants;
- — ways to improve the future courses.

The follow-up and briefing session, which formed Part C, allowed us to discuss with them:

(a) an evaluation of the course:
- — how it could be improved;
- — what role they might have next time;

(b) other ways in which senior staff could help junior staff;

(c) other ways in which we could help senior staff.

Workshop 3 26-29.7.78
"Course on Teaching and Learning in Higher Education"
This was a residential workshop for junior staff. It was based on an isolated island, sixty miles from USM, which provided beautiful surroundings and few distractions. The programme is shown in figure 1. The workshop was preceded by a briefing meeting on 21.7.78.

After returning from the residential workshop, and in the light of our perception of the needs of the University, we ran four more workshops on campus. Each lasted one day and consisted of interactive sessions in which participants explored individually and in small groups the relevance of key ideas to specific teaching and learning problems at USM:

Workshop 4 7.8.78 "Individualized Learning"

Workshop 5 9.8.78 "Keller Plan"

Workshop 6 10.8.78 "Distance Learning"

Workshop 7 11.8.78 "Course Planning'

Finally, as a result of special requests from the Schools of Physics and Education, we offered two seminars:

Seminar 1 15.8.78
"Recent Developments in Laboratory Teaching"

Seminar 2 18.8.78
"How to Help First Year Undergraduates to Study"

Any University which wishes to have a staff training and development programme requires, as we said before, two kinds of staff to run such a programme. There is need for a small number of full-time staff in a staff development unit and for a much large number of experienced staff in departments who assist the full-time staff and provide liaison between the staff development unit and the rest of the University. We believe that USM has the potential and desire to provide such a programme in due course from within its own resources. However, assistance from Britain — or any other country with appropriate experience — will be needed for the training of these two kinds of staff. This could happen both through staff from USM taking courses in Britain and through visiting staff from Britain running courses at USM. The full-time staff would require a total of one year's full-time training, while the experienced staff in departments might need a full-time equivalent training of about three months.

We would suggest that the various types of training put forward in the last paragraph should be viewed as a coordinated programme which includes courses in Britain, courses at USM, correspondence courses using specially designed distance learning materials, and local resource centres. We consider the use of specially designed materials, both in the correspondence courses and in the local resource centres, particularly important.

In line with the above suggestions, we have agreed with USM to visit again in summer 1979 for about four weeks, but this time to spend the major part of our time working with experienced staff in departments, with whom we shall have previously maintained contact through distance learning materials. With their help and that of staff from the Educational Technology Unit, we intend then to run a one week residential course for less experienced staff. In this way we hope to make a substantial move towards establishing a self-sustaining staff training and development programme at USM. We further hope that it may be possible for staff from some other Universities in South East Asia to attend some of the activities.

Our thanks are due to all those, at USM and elsewhere, who worked with us and gave us help, support and advice, and to the Inter-University Council for Higher Education Overseas and the British Council for financial support.

FIGURE 1. TEACHING AND LEARNING COURSE, USM, 26-29.7.78

	9.00 = 10.30	Coffee	11.00 - 12.30	Lunch	14.00 - 15.30	Tea	16.00 - 17.30	Dinner	20.00 - 21.30
We. 26th	"Introduction to course" E		"On Lecturing" E		"Aims and objectives" M & E		"Individualized Learning" M		"Assessment and Examinations" E
Th. 27th	A Small group E B Educ. Aids U CD Audio-visual Communication I M		A Educ. Aids U B Small group E		AB Audio-visual Communication I M C Small group E D Educ. aids U		C Educ. aids U D Small group E		Prepare practice lecture U
Fr. 28th	"Objective Testing" * E		A Lecture practice ** E B Lecture practice ** M CD Objective testing * P				AB Objective testing * P C Lecture practice ** E D Lecture practice ** M		
Sa. 29th	AB Audio-visual Communication II M C Objective testing * E D Evaluation † G		C Evaluation † G D Objective testing * E		A Objective testing * E B Evaluation † G CD Audio-visual Communication II M		A Evaluation † G B Objective testing * E		Reports from "Evaluation" E & M

A, B, C, D: Four groups of 8 members arranged by subject areas

E: Elton
G: Group without tutor
M: Manwaring
P: Private work
U: USM Staff

Notes: 1. All three hour events involve active participation by members

2. A small resource centre, containing a collection of books, articles and learning units, is available during coffee, lunch and tea breaks.

* "Objective testing" is a six-hour workshop

† In "Evaluation" each group evaluates the experience of the course

** "Lecture practice" consists of short 10 minute lectures, which are video-recorded and played back for critical analysis.

What is happening to my people? Community Research by Students at the University of Papua New Guinea

Maev O'Collins

Come my conscience:
my right hand man come.
Hover and float
over this — my village. [1]

Since the establishment of the University of Papua New Guinea in 1966, students have felt conflicting pressures to view education as a way to serve the nation as a whole or to serve the community and clan from which they come. The recent development of provincial government has broadened the idea of graduates serving the nation through centralized government agencies to include provincial centres. However, the image remains of a University graduate, and indeed of most Papua New Guineans with any form of tertiary education, as removed from the community or village, an educated élite who reject their origins and are unwilling, even if the opportunity arises, to work in rural areas. [2]

This paper is the result of five years of working with students who have been interested in fieldwork in their home areas. A major part of the discussion is based on the experiences of 36 students who had enrolled for fieldwork courses during the 1974/75 and 1976/77 long vacations. Others carried out community based research or participated in community activities as part of courses during the academic years, 1973 to 1976. Some students have experienced difficulties of rejection or hostility from their own people. Others have been discouraged by teaching staff who felt that there were both academic and practical objections to students carrying out particular research projects. It was sometimes felt that students were seeking political or economic advantage within their home communities, were looking for easy academic credits from research projects carried out in familiar surroundings which might make it difficult for foreign supervisors to evaluate their work. Or, that they might "cause trouble" which would reflect on the University if it sponsored them. A more serious objection has been that, even with preparation in research methods (a preparation which has often been lacking!), the carrying out of an adequate project would be more difficult in the students' own communities where social and family obligations exist and where a degree of intellectual objectivity might be hard to achieve.

Despite all of these cautions students have shown an increasing interest in working within their own communities. In 1976, for example, a course for first year students, who were planning to work on community development projects over the long vacation, was over-subscribed. Only the lack of supervisors limited the numbers of students enrolled for projects during the long vaction 1976/77. It is important to note this increasing interest in linking University courses with home communities has come at a time when successive committees set up to look at the future of the University have urged that such a link should be established.

In 1973 a Working Party on the Future of the University of Papua New Guinea presented its report to the then Vice-Chancellor. [3] The report reflected a belief that learning and teaching experiences shared by staff and students would be more effective if the University were not seen as a closed community. The importance of the University as an instrument of nation building was again emphasized in 1974 when the Committee of Enquiry into University Development, under the Chairmanship of Dr. Gabriel Gris, completed its report for the Government of Papua New Guinea. A major theme was the need to strike a balance between the University as a supplier of skilled manpower and as a critic of the society it served. Both staff and students should take part in programmes which would extend University services into the community and give opportunities for others to share in a more open learning system. [4]

These moves to broaden the role of the University came at a time when students were being urged to work hard and concentrate on gaining a degree in the quickest possible time as there was an immediate need to localize government and other positions held by expatriates. Many students, however, found that higher education had brought an awareness of their isolation from their families and clan groups. Not only was there a feeling of alienation from their own communities but they also began to be concerned that their communities and families were becoming alienated from them. Was there no way, they asked, to combine both the

need to use all opportunities to complete a degree without delay, with the desire to lessen the gap between themselves and their origins?

EDUCATION AS ALIENATION

At a seminar in 1976, a graduate student described his community's reaction in 1958 to the departure of children to the English language school which was to be his road to higher education.[5] Women wept as if mourning for someone who had died. The title of his seminar paper was "Education robbed me of my child", and this highlights the feeling among many Papua New Guineans that western style education necessarily and inevitably means alienation. The pressure for higher levels of education which began in the 1950's continued with increased strength in the 1960's. The 1964 Report of the Commission on Higher Education in Papua New Guinea noted both external and internal pressures:

> First and foremost is the potential situation of the Territory in the next few years. It is vitally necessary to train indigenous cadres to take over in due time a wide range of functions now carried on almost exclusively by expatriates, or initially to supplement expatriate positions, and it seems very desirable, for the smooth working of any type of university institution, that it should be firmly established before there is any very considerable transfer of political responsibility.[6]

The Commission later referred to "the increasing awareness among the people as a whole, the indigenous legislators and the students themselves of the need for highly educated men for the future development of their country".[7] However, as the process was speeded up it became clear that students, other Papua New Guineans and expatriates alike, were not always happy with the results. Many University students did not want to become alienated and made sure that they spent every long vacation living with their own people. Even so, it was difficult. "The first few days are always hard", commented one student. "Even my father treats me as if I am a stranger — a kiap or some sort of teacher. My mother doesn't want me to cut the firewood and my brothers laugh at me because I have forgotten how to do many things. But if I sit by myself it makes it worse. So I just try to forget everything I have learned during the year and fit in. After a few weeks it is alright and then I don't want to come back at all".

Others found the road to higher eduction was only one way and that they did not want to turn back. "Our community was forgotten. We were leaders in a new way of life".[8]

In a radio play produced in 1967, University students argued over the right of a street singer to be free to wander around Port Moresby. "They must realize that towns are for people like us, who can cope with the Western style of living and stay out of trouble . . .".[9] Some wanted to use their knowledge to help their people. But help them in what way? The new western style of education suddenly seemed useless.

"The fact that I am a Papua New Guinean is not sufficient to allow me to go and work among my own people. Only warm, genuine, and sincere relationships can facilitate better understanding and the better expression of our own feelings. It is the Papua New Guinean's development that we are concerned about and we need his involvement. So what is development? Will it add anything to my happiness?".[10]

One way students could use their knowledge to help their people was in the field of political and community education. In this way education as a means of serving the community would become an immediate reality and the vague, if more grandiose, objectives of "serving the nation" could be left until after graduation. James Griffin initiated a political education project in mid-1971. He accompanied the students and wrote warmly and enthusiastically about their contribution. "There were occasions when the students came under gratuitous attack on account of their privilege, their alleged opinions and their aloofness from the people. They responded to all this with dignity and understanding and the easy rapport that came about in relations with their people was not something one would see in Australia".[11] When re-reading this statement some years later one wonders if the writer was painting too glowing a picture! And yet, when in 1973 a group of students went to the Southern Highlands without a supervisor (I had found the picture of myself leading a group of young Papua New Guineans including two Southern Highlanders on a community study a little too ludicrous to contemplate), they were able to report:

> We would also like to point out several other factors which contributed to the success of the Group's trip. Firstly there were two students who came from the area through whom we were able to communicate. They interpreted what we said and vice versa. Secondly, we were all Papua New Guineans who come from different parts of the country. In other words, there was no white man or member of staff involved. Thirdly, we shared our food with the villagers and whatever they offered us we accepted. For those who will be

taking part in this type of project in the future, we suggest that a student from the particular area be included in the team, and wherever possible students should be given the leading role in organization of the project.[12]

Another way of ensuring that students could be involved in developmental projects or in gathering useful information without continuous academic supervision was for students to work in their own communities during the long vacations. The view also began to be articulated that students who "dropped out" or who returned home after graduation were perhaps better able to integrate the knowledge they had gained and avoid the feelings of permanent social alienation. As one graduate commented: "I didn't think about it for years. I was so busy trying to understand what I was supposed to be doing and what was happening to me. But now I must go back and find out what is happening to my people".

EDUCATION AS RE-INTEGRATION

In 1974, after sporadic efforts by students and staff in which communities were a base for research projects, the Faculty of Arts set up an inter-disciplinary Lahara (or long vacation) field project scheme which enabled students from the end of their first year to undertake supervised projects and obtain some academic credit towards their degrees. Although these projects could be carried out in any area, most students opted for their home districts as air fares home are available to all National Scholarship holders. In addition to special projects, students in the B.A. Social Work programme were able to undertake community fieldwork as part of degree requirements; oral history and literature students could collect source materials; and Agriculture (and to a lesser extent students from other Faculties) could carry out fieldwork in their own areas.

During 1974, I supervised three students who spent a month in their home community as part of a joint project involving Community Development, Rural Development and Community Social Work courses. There had been some reservations on the part of academic staff as to whether students should be funded to go home during the year to conduct such projects. University money and the gaining of academic credit seemed somehow to be improperly obtained if there were a possibility of future political and economic advantage for some of the participants! The fear that students might be acused of "causing trouble" was more realistically dismissed as a hazard of University life with which staff members were familiar. In second semester 1975 several other students worked on similar research projects. I was on study leave at the time but criticisms of lack of objectivity on the part of students and an unwillingness to discuss student/community interaction with academic staff appeared to have lessened the value of these projects at least as a teaching exercise. Successful re-entry and later re-integration is an important phase in any such community project and not all students are able to return home, gather information, and write up research reports in ways which are acceptable to themselves, their families or communities, the academic staff concerned, and often sponsoring agencies as well.

The main group of projects on which this paper is based were carried out during the 1974/75 and 1976/77 long vacations. Thirty-six students were involved although five were unable to complete projects because of personal or community problems and several others had to modify their original objectives when faced with negative community attitudes or other practical problems. Out of the thirty-one who completed projects, nine worked in their own villages, eight in the wider home community, six within the province but at least partially within their own communities, and eight in other provinces. Many other students who did not link their community work with formal academic requirements have talked over their experiences with me. A further source of information has been from discussion with graduates now working in their own districts who are continuing work started while students.

THE REALITY OF RE-ENTRY

It is not surprising to find that some students were faced with suspicion and lack of acceptance when they came home and tried to gather information. "Knowledge is Power" in a small community in the Highlands just as it is in Port Moresby or in the academic arena of an University. Why should the elders easily share knowledge of the past with much younger men (only five out of the original thirty-six were women and none actually worked in her own home community)? For some this reluctance on the part of elder members of the community meant that they had to alter their original research proposals. Even when they were able to earn the confidence of older relatives or community members others were not permitted to use information gained for academic reports. Knowledge of healing, of sorcery for use against one's enemies, of love magic or magic for fishing and hunting, clan histories and stories of origin, and of how the present settlement took place, are all valuable property. One old man challenged his questioner:

> How long will you stay with me so that you can learn? What will you give me in return? You spend many years away from home to gain the new knowledge. Do you think I can give you the knowledge of our lives so quickly?

Another traditional holder of clan knowledge told me that he would prefer that his knowledge died with him rather than give it to the young to play their recordings of songs and legends and be paid big money by the University. Despite explanations and assurances of respect and care in the use of information gained, many older people quite understandably failed to be impressed. After years of lack of interest why were young men suddenly coming and seeking this information?

Time and patience and a determined effort to fully involve themselves in the daily life of the community gained for some the degree of reintegration which they sought. For others, however, it is never a complete re-entry and they must accept a different role as a bringer or interpreter of new ideas and as a link between the community and the resources available from government or other agencies. This problem in achieving complete acceptance meant that some of the more successful projects (from the academic point of view anyway) were those which linked new ways of doing things with the community. Setting up community centres, forming clubs or development associations, initiating economic projects or evaluating ones already established were ways in which students could become useful middle men. There were fewer barriers to gathering information or sharing ideas and students could show that they were interested and willing to share knowledge which they had gained at the University. Despite this advantage those who had been funded by government sponsors or other agencies were likely to have research projects which fixed their position as that of more marginal members of the community.

For those who sought a greater degree of reintegration there were other difficulties. Absence at school and the University meant that they were less fluent in their own language and that they would fumble for words at public meetings. I was present on one such occasion when the student who spoke was, with great amusement, helped by other young men whenever he was lost for the right word. In that particular case it seemed to make for an easier relationship but for others it could be a humiliating experience.

Family and clan obligations had to be met and often this was both financially and emotionally demanding. Some had idealised or romanticised life in their communities while in Port Moresby. Reality called for tact and perseverance if the project was to be carried to completion.

Many were aware before they commenced fieldwork that it would be a difficult road back to the village. Higher education had taken them far away and classroom discussions or other preparations could not ensure that they would find their way back. However, goodwill and tolerance on the part of the older members of the community often made research successful despite student blunders. One group of women commented:

> Yu no ken wari long sumatin. Mipela save em i laik hariap tumas. Yungpela man em i no laik go isi. Em i pasin bilong em, laka?
>
> (Don't worry about the students. We know they are impatient. Young men don't want to move slowly. It is their way of doing things — isn't it?)

These community members were also letting me know that they would work out a new relationship with their own children and that this was something outside the concern of the University!

With the development of provincial governments students are finding that the road back is more open and attractive as opportunities for employment and political power have increased. Graduates whose initial re-entry took place while completing their studies find that their knowledge and skills are being assessed by community and clan members to see whether they will be useful or not. For some the experience of carrying out community research has been a way of learning that, despite their links with home, they will be more comfortable living their working lives away from their community. They are like the hero in *Voices From the Ridge*, of whom the elder says:

> You have heard voices from the ridges. Your shadow and your heart bend to the ways of the past. But your footsteps refuse to stay. Maybe man is made to walk forward and not turn back.[13]

EVALUATION OF COMMUNITY RESEARCH PROJECTS

Planning, preparation and supervision of community research requires coordinated effort on the part of students and academic staff. Practical difficulties have often made it hard for individual projects to be accepted and even the continuation of the programme has been questioned. The standard of research carried out by students varies enormously and some thought has been given to the need to

select only the most able and best prepared students.

But, should we evaluate such community experiences merely in terms of academic excellence? Some of the most useful evaluations have been made by clan and community members who have assessed the performance of returning students and how they have used knowledge gained in ways which have been useful to the group. These students are not necessarily the brightest or the most articulate when giving a seminar or writing up a report which is evaluated against very different standards of excellence.

Another measure of assessment is that of growth in understanding by students of their relationships to their clan and community and of the strengths and developmental needs within that community. After they graduate most of these students will find employment in government agencies. Their lives will be spent away from their villages and this opportunity to plan and carry out community projects may be very significant in helping them come to terms with the intermittent nature of their contact so that they do not become rootless men and women.

For the University the programme of community research by students has other advantages. The links which the 1974 Gris Committee Report sought to encourage between University and community may be developed more effectively if opportunities are increased for students to accept that learning from the community is part of the total learning process. If village leaders and clan and family members are more fully involved in discussions prior to carrying out community research this role of the community as a teacher will also assist in lessening feelings of alienation and social isolation which many students experience.[14]

For University research workers, both Papua New Guineans and foreigners, the development of greater understanding by students and those outside the University of difficulties in conducting well-planned and thoughtful community research will be valuable at a time when foreign researchers need to re-interpret their roles to an increasingly critical government and community audience.

Finally it is important to note that The Constitution of Papua New Guinea expresses a commitment to strengthening Papua New Guinean ways and to retaining and assisting the development of village and community life. This is a country of villages and small communities although government officials and services frequently remain in urban centres.

Increasingly graduates are moving to take responsibility for policy making and the planning of services which will affect the lives of villagers. How real are these communities to them after ten, fifteen or twenty years away with only the occasional visit? Do they feel merely some disquiet of conscience which makes them turn back to look briefly at their villages before graduating and going on to become new men living a western style of life?

Or, as my own experience in working with students and their communities suggests, will facing realities of past alienation and possible reintegration lead to a deeper understanding of what is happening to them and to their people?

Notes and References

[1] Kama Kerpi, "This My Village?", *Call of the Midnight Bird*, Papua Pocket Poets, Volume 37, 1973, University of Papua New Guinea.

[2] See, for example, the views on "Attitudes of Melanesian students to Fieldwork and Research in the Social Science", expressed by J.P. Powell, *Mankind*, Volume 9, 1974, pp. 218-224.

[3] *Report of the Working Party on the Future of the University of Papua New Guinea*, Dr. F. Oldfield, Chairman, October, 1973, University of Papua New Guinea.

[4] *Report of the Committee of Enquiry into University Development*, Dr. Gabriel Gris, Chairman, 1974.

[5] August Kituai, "Education Robbed me of my Child", presented at a History Department seminar at the University of Papua New Guinea, 1976.

[6] *Report on the Commission on Higher Education in Papua New Guinea*, Chairman, Sir George Currie, 1964, Canberra, Australia, page 8.

[7] *Ibid.*, page 117.

[8] Nelson Giraure, "The need for a cultural programme: personal reflections", *Education in Melanesia*, Papers delivered at the Eighth Waigani Seminar, May 1974, page 103.

[9] Nora Vagi Brash, *The High Cost of Living Differently*, radio play first produced in 1967, published by the Institute of Papua New Guinea Studies in conjunction with the National Broadcasting System, 1976, page 10.

[10] Moi Avei, "Priorities in Social Services", *Priorities in Melanesian Development*, Papers delivered at the Sixth Waigani Seminar, April 30 to May 5, 1972, page 109.

[11] James Griffin, "Students as Public Educators", *loc. cit.* page 259.

[12] T. Bais, General Instroduction to "Wambip Community Study", unpublished research report, 1973, University of Papua New Guinea.

[13] Peter Kama Kerpi, *Voices from the Ridge*, 1974, The Centre for Creative Arts.

[14] This was the theme of a public lecture which I gave at the University of Papua New Guinea, "The Community as Teacher: Ngavalus, New Ireland, 1974-1976", 8 June, 1976, unpublished paper.

Institutionalized Censorship: the Ideological Control of Post-War Japanese Education

Glenn D. Hook

Through the education system the state plays an overwhelming role in shaping the ideologies, world views and political values of new members of any society. The textbook is here critical. Whether it be to consciously foster national identity, as in South East Asia, or to colour history a particular shade of Anglo-Saxon white, as in the United States prior to the outcry of minority groups, there is no denying the political force of the textbook for shaping minds. This is made particularly clear in post-war Japan, where there exists a lack of consensus over the right of the Ministry of Education to "certify" or, more precisely, censor textbooks and thus play such a significantly political role.

The underlying conflict is between those who view the education system as a vehicle to change attitudes and values and those who view it as a tool to maintain the status-quo. The primary contestants are the Ministry of Education, on the one side, and the textbook writers and publishers backed by the powerful Japan Teachers' Federation, on the other. Foremost among the ideals of the opponents is that of a weakened Ministry as envisioned in the democratization of education programme instituted by the Americans during the Occupation.[1] Typical of the conflict is the controversy surrounding the treatment in school textbooks used during the years of compulsory education of such subjects as War, the Emperor, the constitutionality of the Self-Defence Force and the atomic bombing of Hiroshima and Nagasaki.

Of main concern, therefore, are the Social Studies texts employed during the years of primary (six years) and secondary school (three years) education. These texts are produced by private publishing companies,[2] but particularly after instituting the free state supply of textbooks in 1963 and the passage of the Textbook State Control Law of 1966, the Ministry of Education's control of text content has increased. Specifically, textbooks must be produced in accordance with rules and regulations outlined in the Teacher's Guidelines, stipulating the content of compulsory education; the Curriculum Materials Certification Regulations, stating certification procedures for textbooks; the Curriculum Material Certification Standards, establishing standards for the treatment of each school subject; and the Curriculum Material Certification Standard's Detailed Rules for Execution, establishing general standards for Japanese school textbooks. All of the above were revised in 1977, reflecting a major change of emphasis in Japanese education. This change can be seen in the recommendations for educational improvement made by the Curriculum Deliberation Committee in 1976, in which there was a call for education to be made more "relaxed" (yutori).

The above mentioned rules and regulations form the basic guidelines for textbook writers and publishers. For textbooks to receive the Ministry's stamp of approval it is therefore necessary for all concerned to abide by these rules and regulations. Since only Ministry certified textbooks are allowed to be used in public schools, not to do so would disqualify any text produced from being employed in Japanese schools

The legal base for the Ministry's preponderant position in the education system can be found in the School Education Law, in particular articles 12, 40, 51 and 76, respectively establishing that in primary schools, secondary schools, high schools, blind schools and so forth only materials certified by the Ministry of Education or those to which the Ministry holds copyright may be used in public schools. Article 5 of the Ministry of Education Establishment Law moreover states that the Ministry has the right to carry out the administrative duties associated with textbook certification.[3]

It is not only at the entrenched position of the Ministry that criticism is levelled by government opponents but also at the operation of the certification system. In general, it takes over three years from the time the publisher plans on producing a particular textbook to the time it reaches the pupil, the pupil then using the text for three years. This process can best be understood by considering it on the time dimension.

It takes approximately one year to one and a half years for the "Draft" text to be produced and submitted to the Ministry of Education for approval. Texts are not usually the work of one particular author. Rather, a team of University and high school teachers under the direction of a senior University professor, chosen by the publishing company, form an editorial committee in cooperation with the editors of the company. The actual writing is carried out by a team of academics from the committee and can be composed of from as few as three or four to as many as twenty writers. There is close collaboration between the publishers and authors in order to ensure the "appropriateness" of the text in terms of content and the overall textbook planning of the publishing company. After the text has been drafted it is submitted to the Ministry following the publishing company's own thorough check of the text.

Under the revised regulations promulgated in September 1977 it is now possible for publishers to submit the draft-text to the Ministry in order to determine whether in its present form it can be accepted for "formal" inspection or if in the opinion of the Ministry's inspectors it still contains such an abundance of "errors" that non-certification would be the only possible outcome of formal submission for Ministerial inspection. Should the text not be acceptable at this stage, it has to be re-submitted within fifteen days. Texts not re-submitted within this period are automatically disapproved.

Accordingly textbooks meeting the Ministry's standards at the time of the preliminary inspection and those re-submitted within fifteen days pass through the formal certification systems. These texts, bearing no indication of the publishing company nor author, are formally inspected by the Ministry of Education textbook inspectors, members of the Textbook Certification Committee and "part-time" external textbook examiners scattered throughout Japan. Fairness and impartiality in inspecting the texts are meant to be ensured by the lack of authorship or publisher on the text cover. In line with the ideological division between the two sides, however, there are arguments and counter-arguments; namely, that through the style of writing or content the Ministry can tell the origin of a particular text — the argument of the Japan Teachers' Federation — while the Ministry, of course, insists that this is impossible.

There are forty-three full-time textbook inspectors in the Ministry of Education of which four or five are responsible for Social Studies texts. Their role is as we have seen to, firstly, act as a window for the Ministry and carry out "pre-inspection" of texts submitted; it is also, secondly, to carry out a thorough inspection of the texts; thirdly, to participate in and act as advisors to the Textbook Certification Committee; and, finally, to orally pass on or interpret to the authors and publishers the decisions reached in these Committee meetings. This means, of course, that no written comments or criticisms are given to those who have submitted the text.

It is particularly in regard to this final role that critics of the Ministry are most vituperate. Quite simply, the argument is that the inspectors' own political beliefs or ideology prevent objective interpretation of the decisions reached in the Textbook Certification Committee. Prior to the revision of the certification procedures in September 1977 there were two types of corrections recommended by the Committee. The first, referred to as A *joken* (condition), implied that the particular point in question *had* to be revised before the text could receive government approval; the second, referred to as B *joken*, implied simply the Ministry's recommendation that it was preferable for the point in question to be changed; however, this would be left to the discretion of the author or publisher. It was argued by the editors I interviewed that it greatly depended on the particular inspector dealing with the text as to what extent he would treat a B *joken* as an A *joken*.[4] Of course, since the text is clearly marked with the *joken* in question the publisher can insist on maintaining the position expressed in the text. At the same time, however, the publisher is aware of the fact that he will have to continue to deal with the same inspector for a number of years (usually three years) and so attempts to establish as smooth a working relationship as possible. This quite clearly implies that bureaucrats are not simply politically neutral tools of the government, but make judgments that give them an explicitly political role.

The Textbook Certification Committees are divided according to discipline. Following is a list of the different sections and the occupation of the members:[5]

Committee	*Members*	*Occupations*
Language	10	3 professors, 3 headmasters, 1 critic, 1 head of a research institute, 2 unknown
Social Studies	19	8 professors, 5 professors emeritus, 2 headmasters, 1 banker, 1 lawyer, 1 critic, 1 head of a research institute
Mathematics	7	4 professors, 3 headmasters
Sciences	13	6 professors, 3 headmasters, 1 ex-curator, 2 professors emeritus, 1 businessman
Music	5	4 professors, 1 headmaster
Arts	7	3 professors, 2 headmasters, 1 critic, 1 museum curator
Foreign Languages	6	3 professors, 2 headmasters, 1 unknown
Physical Education	5	2 professors, 2 headmasters, 1 unknown
Home Economics, Technical	18	8 professors, 1 university president, 3 heads of research institutes, 1 university department head, 2 professors emeritus, 2 headmasters, 1 academic

As can be seen by a glance down the "occupations" column, the members of the Certification Committees are mostly drawn from the academic world. Ideologically they are judged by government critics to be all of the same creed — conservative pro-government. Indeed, simply by agreeing to sit on such a committee one automatically becomes branded as pro-government; in other words, no critic of the government would ever agree to accept such a position, and would in the first place no doubt never be appointed by the Minister of Education.

Apart from criticism of the ideological make-up of the Committees, there is also criticism of the actual conduct of Committee meetings; in particular, that Committee meetings are held in total secrecy with only the participation of the Committee members and the Ministry inspectors being allowed. Even the external textbook examiners, of which there are approximately five hundred throughout Japan, are not allowed to attend any of these meetings. Three or four of these external examiners, usually practising teachers, report on a particular text. Their reports may be utilized as a reference by the Committee, but they have no direct influence on the outcome of the particular text they examined. Such lack of democratic procedures and total secrecy thus becomes a major point of criticism of the certification system.

The time required for a text to obtain approval through the above process can be as long as one year. There are in theory three possible outcomes once the text has been formally accepted for certification. First, it may be passed (*gokaku*). In reality, however, this does not occur. Rather, the second possibility, passed subject to certain conditions (*joken tsuki*), tends to be the rule. The third possibility is that the text is refused certification (*fugokaku*). In this case, the publisher will be given reasons as to why the text cannot be passed. Since the revision of the system in September 1977, the publisher is now allowed to appeal the Ministry's decision within twenty days. Should the decision be reversed by the Certification Committee, the text then follows the same path as those texts passed subject to certain conditions, otherwise it is refused certification. Even in the case of those passed subject to certain conditions, moreover, the publisher is allowed to appeal these conditions within fifteen days. In a sense, therefore, this has made the procedures more democratic compared with the prior system in which it was not even possible to appeal.

Such changes in structure, however, do not necessarily mean changes in content. In the first place, although appeal is now possible, any appeal that is lodged is not dealt with by an objective third party, but by exactly the same committee and Ministry inspectors that made the decision. This leaves little likelihood that the decision will be changed. Secondly, both those who appeal the conditions imposed and those who accept them must still satisfy the Ministry inspectors — since it is they who act as the voice for the Committees — before the text can gain official Ministry of Education certification. Despite the possibility of authors and publishers being unprepared to bow to

Ministerial recommendations, the important point to bear in mind is that the government is in essence the only customer for the textbook publishing companies. Thus, market considerations always underlie any dealings between the publishers and Ministry of Education. In short, unless the text gains official certification, there is no market.

Once texts have gained official certification they are put on display at textbook exhibitions held throughout the country in a period specified by the Ministry of Education (usually sometime in July). Text selection, ordering, distribution and so forth takes approximately nine months. Procedures differ slightly depending upon the particular school district, of which there are over four hundred and ninety, but in general schools within a particular district must employ the same textbook, such texts being chosen with the "assistance and guidance" of the Prefectural Education Committee. This means, of course, that teachers do not have the ultimate right to decide upon which text to use in their classes.

Although teachers do not have the right to choose their own textbooks they do have a distant voice in deciding what text is to be used. This applies particularly in large cities such as Tokyo. Teachers in the schools all decide upon particular textbooks. Taking into account the teachers' opinions, the school then recommends certain texts to the district school board, which then advises the City Education Committee (equivalent to the Prefectural Education Committee) of the recommendations made by each school in the district. If we equate this with a voting system, it is as if teachers vote for a particular text in their own school. If they are on the side gaining a majority, the school then makes a recommendation for that text. If at the next stage there is still a majority of the schools in the district in favour of the same text, then a recommendation for the text will go through to the City or Prefectural Education Committee. Since this is where the ultimate locus of power is, the recommendation can be rejected. At the same time, of course, someone who was in a minority position in their own school may end up using the text they were in favour of, simply because a majority further up were in favour of that particular text. Undoubtedly, in practice there are attempts to build-up a consensus for a particular text; however the fact remains that the teachers are far removed from the decision-making process in terms of the text they use in their own class.

In any event, it can be argued that since all of the texts have been through certification procedures there is little difference in terms of ideological content. There are a number of types of corrections and changes that can be made to a textbook during the process of Ministerial certification. There are basically five categories into which these can be broken down: [6]

1. Typographical errors, lack of correspondence between the body of the text and the illustrations; lack of consistency in the use of specialized vocabulary, logical contradiction with something previously stated; unclear printing
2. Mistakes in regard to objective fact
3. Lack of coordination in expression or use of poor expressions
4. Making the text too easy or too difficult from the educational point of view; unsuitability in the number of pages; need for explanation or definition; check (censor) of ideas in regard to society, politics and history
5. Not following the teachers guidelines.

Given the above scope of the Ministry of Education's power, there are undoubtedly many cases in which the Ministry is perfectly justified in suggesting changes in the text. For example, last year a textbook produced for secondary school students was drastically changed during the certification process. In a story about the "Monument of the War Dead", one of the characters, an ex-soldier of 50 years old, reminisces about the war. One of the Ministry's corrections was to change his age to 55 years old, since leaving it at 50 would mean he had gone to war at 18, a clear error of historical fact (conscription was from twenty years of age).

Apart from such easily justifiable changes, however, there was clearly censorship of the author's ideas. When the text was first submitted to the Ministry of Education there were thirty two pages on the "Monument to the War Dead", reduced to a mere eleven pages in the final version. The aim of this section was to focus on Japan's involvement in recent wars, at the same time as examining how post-war Japan differs from pre-war Japan. The central theme was that of basic human rights. This was made clear in the introduction: [7]

> The most basic human right is the right to live. Yet there are times when there is not even the freedom to live. Why is this? Let us examine some familiar incidents in our study of history.

In the final version of the text, this introduction no longer appears, despite the fact that it was meant to point the direction of study for the students.

Again, in the original version of the text, the story revolves around four characters. Firstly, an old man of seventy years old (seventy seven in the final version) who strove for the construction of the monument to the war dead. Secondly, a fifty year old ex-soldier (fifty five in the final version) who participated in the second world war. Thirdly, an old woman of seventy five years old who lost her only son in the war. Their stories are presented to the pupils as if told by a grandfather, uncle and grandmother. The fourth character, a young University student presented as an older brother, states his opinion about war as one of the post-war generation who has had no experience of any of the wars that Japan has fought. Taken from another perspective, the first represents an affirmation of Japan's wars after the Meiji Restoration (1868). The second, though expressing opposition to wars based on personal feelings, affirms war as a result of the inability of social science to explain wars. The third opposes what are considered to be expansionist wars of invasion. The fourth questions the different opinions offered, or, as concluded in the original text:

> Just who is right? How should I think about war? I no longer know.

In the final version of the text not only was the above rhetorical questioning of the student cut, but *all* of what he said; hence, the final version simply represents the opinions and experiences of the three other characters. Even here, moreover, a number of changes or cuts have been made. Following are examples of some of the passages concerned:

Before Inspection
Under the Imperial Constitution sovereignty rested with the Emperor and he was a god. The Emperor was also in command of the armed forces. Therefore, people thought of the draft call into the armed forces as being the same as the Emperor's order.

After Inspection
It stipulates in the present Japanese constitution that Japan will not wage war. Under the previous constitution war was accepted. The Emperor was the highest commander of the armed forces.

Before Inspection
Isn't it possible that those people who died in the war did not know the true situation . . . They were taught that it was because the other country was in the wrong that the war was being fought. If they did not know the true situation, then I cannot understand what their death was for.

After Inspection
. . . isn't it possible that they went off to war without knowing the true situation.

Cut
Why is it that wars are continually occurring? There are those who say it is for the country, but what is the relationship between this and fighting a war? How did the people at that time think about the war?

During the time that those who had been working were at war, their wages were handed over to their families. However, those what were in greatest difficulty were farming families which were left with only wives and children.

(During war time) there was not only rationing of everday essentials such as matches, sugar, rice and so on, but laws were made so that boys could be ordered to work in factories to make weapons.

The final version of the text that reached the pupils in April 1978 was thus completely different from the original version. In fact, it can probably be said that if it had not been for the disclosures made by one of the textbook editors to the press and the build-up of public opinion, the text would not have been given Ministry approval. In its final form, however, it is somewhat disjointed. In other words, it has gone through so many changes that the original focus of the authors has been lost.

The extent to which the above text was censored in the process of certification is perhaps an exception. It is unusual for contents to be cut to such a large extent. What usually happens, of course, is that the publisher employs a kind of self-censorship to ensure that texts are not ultimately refused Ministry certification. Some texts nonetheless suffer this fate, though for obvious reasons both sides try to avoid such an outcome as much as possible. Below is the average percentage of the number of texts certified, culminated for primary, secondary and high school texts: [8]

Year	*Certified*
1971	89 per cent
1972	91 per cent
1973	93 per cent
1974	93 per cent
1975	95 per cent
1976	91 per cent

Although there is thus a very high percentage of texts which are certified, what is of importance are the kind of changes that have to be made before a text can receive Ministry of Education certification. Below are a few representative examples of the kind of changes that take place in the textbooks before they reach the student, clearly indicating that the case discussed above is simply an exteme manifestation of a basic characteristic of the certification system. [9]

Some of the other corrections the Ministry makes are more clearly ideological:

Before Inspection
The Japanese government indicated an attitude of ignoring the Potsdam declaration, *so* the United States dropped the world's first atomic bomb in Hiroshima . . .

After Inspection
The Japanese government adopted an attitude of ignoring the Potsdam Declaration. The United States dropped the world's first atomic bomb on Hiroshima.

Before Inspection
My only son dies in the Pacific War . . . I told him, "It's the Emperor's order. Go out and die for your country without thinking about whether you'll return alive . . ."

After Inspection
My only son dies in the Pacific War . . . I told him, "Go out and flight for your country . . ."

Before Inspection
At present the equipment of the Self Defense Force is equal in war potential to that of other countries.

After Inspection
. . . the equipment of the Self Defense Force has increased.

Before Inspection
The Police Reserve Force in 1954 became the Self Defense Force composed of the army, navy and air force.

After Inspection
The Police Reserve Force became the Self Defense Force having land, sea and air defensive strength.

As can be seen, there has here been a change in nuance and meaning. To summarize, it was not because of the government's attitude that the atomic bomb was dropped, critical mention of the Emperor is "taboo", and the Self Defense Force has no war potential nor is it military in nature. Indeed, certain words and phrases are omitted or completely changed in the final version of the text. It is never, for example, a Japanese "invasion" of China, but rather an "extension of Japanese power". The censorship of material not favourable to the government can thus be carried out through the textbook certification system. In general, the policy seems to be to either only allow into the final version of the textbook material on which there already exists a consensus, or to use the certification system as a means to impose the government's viewpoint, perhaps noting the existence of opposing points of view. The aim is thus not to expose the pupils to a variety of ideas to stimulate their own thinking or ability to make independent judgments, but rather to *a priori* make that judgment from the perspective of what view the government thinks the pupils should adopt.

The most recent textbook controversy to come to public attention is that of a prominent anti-establishment philosopher, Osamu Kuno, whose Social Studies textbook was refused Ministry of Education certification for the second year running. There is the possibility of taking the case to court, as discussed below, but Kuno was not in favour of such an action. His comment is telling: "If we did that, it would be pitiful for the textbook company. Let's correct the points the Ministry has indicated and try again next year".[10] Kuno did exactly that. When the Ministry first refused to certify Kuno's text there were only several dozen points in question. After working to correct these, the text was re-submitted and then returned (April 1977) to Kuno. This time, however, there were three hundred and twelve points indicated by the Ministry. To one editor this shows that "although in principle (*tatemae*) the members of the Certification Committee do not know the authors of the text it is possible for the Committee members to find out the authors".[11]

There are no doubt many interpretations that can be given regarding the quality of a particular text. For example, in an interview with some teachers, it was evaluated by one as being "unique, full of ideas . . . overall an excellent text".[12] Another was critical: "I am not sure if the students will be able to understand . . . it is too abstract".[13] Even the critical comments given, however, do not bear much resemblance to the reasons given by the Ministry of Education for its rejection of Kuno's text: "The level of the first section of the text is too low. It is also one sided. In particular, 'The Family' and 'Youth and Society' are dreadful; the former, not being based on general understanding; the latter, lacking scholarly development of content and style".[14] It is hardly necessary to quote any further to demonstrate the different type of

interpretation that can be given. The point to bear in mind is the ideological conflict which lies behind these remarks.

Actually, at the present moment there is a legal suit being fought by Professor Saburo Ienaga, formerly of the Tokyo University of Education, and the Ministry of Education.[15] Ienaga charged in 1965 that the Ministry of Education censored a textbook he had written and was thus violating the principles enshrined in the Japanese Constitution and The Basic Education Law. The Tokyo District Court in 1970 ruled in favour of Ienaga, arguing that certification of textbooks should be limited to making corrections of "typographical errors, misprints and clear errors of historical fact".[16] The Ministry, of course, immediately appealed this decision which also made the point that the right of education rests with the people (i.e. not the Ministry of Education). In 1974 another decision was made, this time in favour of the Ministry of Education. The third and latest decision was made in 1977, this time again upholding Ienaga's position. The case will next be fought in the supreme court.

The argument offered by Ienaga is that the Ministry of Education's right of certification equals censorship. In particular, then, it contravenes article 21 of the Japanese Constitution:

> Freedom of assembly and association as well as speech, press and all other forms of expression are guaranteed.
>
> No censorship shall be maintained, nor shall the secrecy of any means of communication be violated.

The Ministry's arguments may be summarized as follows[17]:

1. The certification system gives to particular materials the standing of textbooks. It does not concern the people's rights as guaranteed in article 21 of the Constitution.
2. Certification is not preinspection.
3. The purpose of inspection is not to prevent publishing. Even those books refused certification can be freely published, it is simply that they cannot be used in the schools as textbooks.
4. The certification system is a rational and necessary system to ensure the suitable education of minors. Constitutional rights simply apply to adults.

These are the specific arguments of the government in regard to the Ienaga case. On a more general level, the certification system is seen as being necessary for a number of other reasons. Firstly, it guarantees the neutrality of education. It is emphasized, for example, that the Japan Teacher's Federation is a supporter of the Japan Socialist Party, the major opposition party in Japan. The blind spot in this argument is that it is based on a false premise; namely, that those carrying out inspection *are* neutral. Quite clearly, Ministry bureaucrats and those on the Certification Committees are not politically neutral tools. This is not only meant in the obvious sense that those chosen to sit on the Committees or those that become Ministry inspectors are hardly likely to be government antagonists, but also in the sense that the very act of making a decision on the suitability of text materials is a political act.

The second argument is that the certification system ensures that the textbook is "right". The idea that the textbook embodies the "truth" seems to be a deep-rooted feeling among the Japanese people. While we may concur that 2 plus 2 equals 4 is right, to reach a consensus on the "right" answer to historical, social and political questions is less straight forward. By the "right" answer being defined through the certification system, however, the officials concerned are again playing a political role and helping standardize public opinion.

The third argument pertains to the advantages of standardized education throughout the country. As I have argued elsewhere,[18] the modern system of Japanese education was not based on mass pressure for education for the benefit of the individual; it was rather established directly from above with the aim of producing people to serve the newly industrializing state. This has meant an emphasis on standardizing education throughout Japan to ensure that pupils educated in the rural North of Hokkaido have texts of the same overall quality and content as those in large urban areas such as Tokyo. This is quite a different concept of education to that upon which English education is based. In this case, the ideal is education for the individual to develop his/her individuality, talent and ability. It would thus be recognized that due to such things as differences in ability between pupils or differences in environment between the above two extremes, different texts may be suitable in accordance with the judgment of the teacher. These differences in educational values are closely related to major differences between a group oriented society and a more individualistic oriented society.

Finally, the certification system is seen as being necessary to guarantee the suitability of

textbook content. It ensures, for example, that by following the Teacher's Guidelines and using Ministry approved texts, the level of education matches the pupil's level of development. This again takes a standardized view, this time of the pupils' development — i.e. that at a particular age pupils will be at a particular stage of intellectual development. The growth in the number of *ochikobure* (children who cannot keep up) prompted the government to take counter-measures, reflected in the move to more "relaxed" (yutori) education. However, this is not a change in the basic position of the Ministry of Education; it is simply that pupils will have more time to complete particular text materials. In other words, pupils throughout Japan will still continue to use the same textbooks.

For the reasons outlined above, therefore, the government objects to the free publication and use of school textbooks. To what extent we accept or reject these arguments and counter-arguments is, of course, intimately connected with our own world views and ideological beliefs. Indeed, in spite of the fact that the overall revision of the education system and of rules and regulations applicable to the certification system was carried out by the Ministry of Education partly as a result of the criticism levelled by government opponents, these opponents view the changes in a negative light. This was seen, for example, when the Ministry of Education announced in early 1977 new Ministerial Guidelines pertaining to subjects to be covered in secondary school. Under the heading "Japanese Politics and International Society", sub-headed "The International Community and Peace", the Ministry advised that pupils should be made to understand that ". . . mutual understanding and cooperation between the people of all countries is important for improving human welfare and maintaining peace".[19] As the press, Japan Teachers' Federation, academics and other critics immediately pointed out, however, the new guidelines made no mention of the need to teach pupils of the threat of world peace posed by nuclear weapons. The revised guidelines published later in the year take account of this criticism and state that in discussing the international community and peace ". . . the threat of nuclear weapons should be understood and there should be created an attitude of cooperation and enthusiasm to prevent war and establish peace".[20]

Two interpretations can be offered here. The first is that of the Ministry of Education; namely, that the threat posed by nuclear weapons would naturally have had to have been dealt with in discussing the international community and peace leaving no necessity to mention it specifically. In other words, there was no conscious effort on the part of the Ministry of Education to exclude this issue. The counter-argument reflects the fear that the Ministry may be attempting to do exactly this . . . attempting to censor mention of the nuclear issue as a further step in the government's continuing effort to "cure" the Japanese people of their "nuclear allergy" or, more precisely, to foster a breeding ground for the "nuclear disease". Of course, simply because an issue is not specifically mentioned in the guidelines does not mean that it would not be covered in the classroom. The important point is rather that those which are mentioned have to be covered. In this case, then, the specific mention of nuclear weapons ensures it will be included in school textbooks.

It seems clear from our discussion of the conflict and controversy surrounding textbook certification in Japan that historical and socio-cultural factors influence the development and awareness of educational problems. In many underdeveloped countries, of course, the main concern is simply to obtain textbooks. In America, in contrast, the struggle of minority groups is for the same up-to-date textbooks that white students use or for textbooks with more minority content. In Japan, as we have seen, government opponents are struggling to restrict the government's control of the ideological content of education.

Indeed, there is a strong fear of governmental control of education in Japan. The roots of this fear go back to the pre-war period. At this time, the militarists in Japan utilized the education system to build up loyalty and patriotism to the Japanese state. An underlying fear of the opponents of government control is that the education system may again be used to create a nationalistic-militaristic ideology.

Such fear and questioning is a natural consequence of Japan losing the war. Through the pre-war education system the people had been indoctrinated with a belief in the superiority of the Japanese. It was thus not simply that Japan lost the war, but that it lost the organizing ideology upon which the pre-war system was founded — Japanese superiority, loyalty and respect for the Emperor and the state, obedience to one's parents and so on. The rapid turn around from militarism to democracy can best be understood in this context. The education system under the control of the militarists had functioned to build up myths and lies. The people were shocked to find that the American "monster" they had been taught would

rape and murder, smiled and gave out candy and chewing-gum to children after the defeat. Of course, in any attempt to exorcise militaristic ideology from the body politic it is essential to reform the education system. The Americans realized this. At the same time, to prevent the remilitarization of Japan careful monitoring of the content of Japanese textbooks is seen to be in order. To Professor Ienaga the censorship of his textbook was ". . . a political intention to preclude the dark side of war from the content of education, to keep the ideal of abolition of war in the present constitution from permeating into the people's minds, and thus to remove all barriers to rearmament".[21]

What Professor Ienaga and many other textbook authors are attempting to do, then, is to point out the "dark side" of Japanese history and society. Instead of glorifying former generals who invaded Manchuria or colonized Korea, they aim to describe the effects of war on the people. Such an approach reflects an underlying conflict between historians themselves. Some historians, whether in Japan or elsewhere, are more interested in describing the exploits of generals and politicians than in describing the ordinary life and sufferings of the mass of people who lived at the same time. For the "democratic winners" of the second world war, it is much easier to justify the atrocities of their national heroes than it is for the "fascist losers". As we have seen, the certification system in Japan can be used to blot out or neutralize particular descriptions of Japanese history or change the nuance and meaning of particular events. In this we can clearly identify the power of the education system for shaping the people's mind. Indeed, given the almost total reliance of teachers and pupils on the textbook in Japan, its influence as an instrument of political socialization cannot be ignored. The conflict between the Ministry of Education and its opponents should thus not simply be understood in the narrow sense of a struggle over the content of post-war Japanese education, but in the broader sense of a struggle over the desirable direction for post-war Japanese society. It is most of all in this that we find the significance of the Ministry of Education's attempt to control the ideological content of post-war Japanese education.

Notes and References

[1] For a discussiion of the attempt at democratization see Hugh Borton, *Japan's Modern Century*, New York, The Ronald Press Company, 1955, pp. 463-495.

[2] There are at present a total of 8 private publishing companies that produce social studies textbooks for primary and secondary education.

[3] *Kyokasho Report* (Textbook Report), 1978, pp. 39-43.

[4] The interviews were carried out in September and October 1977.

[5] Ministry of Education, internal circular.

[6] *Textbook Report*, 1978, page 39.

[7] All quotes taken from *Kyokasho o Kokumin no te ni* (Put Textbooks in the Hands of the People), Hiroshima Peace Education Research Institute, 1977.

[8] *Genko Kyokasho Seido no Gaiyo* (Outline of the Present Textbook System), Ministry of Education, ref. KJJ 80133, 1977, page 19.

[9] For a further discussion, see the author's "Peace Issues in Japanese Textbooks" in *Peace Research in Japan 1977-78*, Japan Peace Research Group, 1978, pp. 62-3.

[10] *Sandee Mainichi* (The Sunday Mainichi), April 9, 1978, page 21.

[11] *Ibid*, page 22

[12] *Ibid*, page 22

[13] *Ibid*, page 22

[14] *Ibid*, page 22

[15] For details of the Ienaga Case, see R.P. Dore, "Textbook Censorship in Japan: The Ienaga Case *"Pacific Affairs*, Vol. 38, No. 4, Winter 1970-71, particularly page 556. Ienaga Saburo, "The Historical Significance of the Japanese Textbook Lawsuit", *Bulletin of Concerned Asian Scholars*, Vol. 2, No. 4, Fall 1970, pp. 2-12.

[16] As quoted in John Halliday and Gavan McCormack, *Japanese Imperialism Today*, Pelican, 1973, page 189.

[17] *Textbook Report*, 1978, page 40.

[18] See "Education in Japan: Its Strengths and Weaknesses", *PHP International*, Vol. 9, No. 7, July, 1978, pp. 74-81.

[19] Sidoyoryo, (Teacher's Guidelines), Ministry of Education, April 1977, page 31.

[20] *Ibid*. July, 1977, page 31.

[21] Ienaga Saburo, *op. cit.*

A Computer Installation in a University in a Developing Country

R.J.P. Scott

In this paper I shall outline the areas in which a computer can be used both to assist the administration of a rapidly growing University and to provide the important academic training required by manpower in a developing country.[1]

I shall also outline the ways in which important academic programmes in Information Processing/Computer related subjects can be provided. I shall discuss some of the problems encountered in the development of such resources for both administrative and academic applications. I will refer throughout to a paper which I presented in Zambia in 1972 [3]

INFORMATION PROCESSING/COMPUTER SCIENCE

Before outlining how a computer can be used in a University in a developing country it is important to specify the types of applications for which computers have been designed. In *Scott* (1978) [2] I defined the computer and its applications in developing countries. By computer here I am referring to the conventional definition of general purpose digital computer housed in a purpose-built and air cooled computer room which is used by an organization for a variety of different tasks. Most of the computers installed in developing countries are used for routine accounting procedures like payroll, accounts payable, accounts receivable, utility billing, stock control, etc, the data being processed being letters and numbers used both in their character form for reference (names and addresses, account numbers), and in their arithmetic form (units of quantity, unit price). The majority of applications in developing countries are for information processing and not complex scientific calculations. It is the latter applications that have given the impetus for the development of larger and faster computing machines in the world. It is associated with these new developments that computer science has evolved. With the rise in the information processing applications of computers, the techniques and theories of data processing, informatics, and information processing have arisen.[5] To date several conferences have been held on the subject of the information technology for development. Two reports on the application of computer Technology for Development, have been produced in 1971 and 1976, by the United Nations.[4]

A COMPUTER AND UNIVERSITY ADMINISTRATION

The University is one of the largest organizations in a developing country and as such should be administered as effectively as a large business corporation with the exception that a profit is not to be made but at the same time a loss should not be sustained. The computer is essentially an information processing system which by its principle advantages over manual systems in speed of operation, compactness of storage, accuracy of operation, and automatic mode of working should be employed to assist in areas of administration which are hampered in development by the sheer volume of information that need to be processed. The computer is a machine that has to be used by human users and it is only capable of executing processes that are set out step by step in the form of a programme.

The actual physical equipment is known as the hardware, whilst the collections of programmes are known as the software. It is the software that confronts the user of the computer. The use of the computer is only as good as the person who writes the programme. As is well known, "computers" have been held responsible for many errors which are in fact attributable to the user or the programmer and not due to a fault in the hardware. The computer does provide an administrator with the ability to process information accurately to an extent undreamt of previously. However, as I will illustrate later, it is of no use to be able to produce a report of so and so from the computer in 5 minutes when the administrative committee at which a decision can be made takes a further three weeks to meet.

ADMINISTRATION USES

The main areas in which the computer can be used in the administration of a University are:

1) Financial control
2) Student Records — Undergraduate and Postgraduate Nominal rolls

3) Examination processing
4) Timetabling — rooms, examinations, and courses
5) Residential Administration
6) Personnel Records
7) Library Services
8) Planning
9) Admissions.

1. *Financial Control*

The most important areas of financial control in a University are: expenditure and revenue, student finance and payroll. It should be remembered that most new Universities have a recurrent expenditure in excess of £5,000,000 (sterling) which is a large proportion of the total education budget for the country. When delays occur in processing expenditure and revenue, the Finance Office has to "finance its own inefficiency". The first application has the prime objective of being able to provide the Finance Ofice and the spending offices with an up-to-date report for any given vote number (account) each day. In most Universities these are produced using accounting machines and are often 3 months out of date which makes control of commitment accounting usually impossible. The second application, student finances, should be the most important for auditing purposes, for after all it is the students who are the elements of production, albeit human, in the corporation called the University. It is often the case that sponsors or donors of student awards will not pay their dues until accurate reports of all their students' fees are received from the Finance Office. Delays in production of these statements are often causes of serious cash flow problems in a University. The last application cited, payroll, is usually the first application computerised by the Finance Officer. That has been the case in Nairobi and Lusaka. Salaries and wages may be run as separate components of the payroll in a University. The process of payroll is a very simple one which does not change from month to month for approximately 70 to 80% of its members. It is imperative that the payroll is produced accurately and on time. When an optimum number of persons are included on a payroll it is found from experience that a computerised payroll is required to achieve the desired level of accuracy and promptness. That optimum level is approximately 500 persons.

2. *Students' Records — Undergraduates' and Postgraduates' Nominal Rolls*

(a) *Undergraduates*

Undergraduate student records systems can be designed to keep track of an undergraduate from the admission stage right through to the final graduation or other termination stages. Once a nominal roll is established on the computer files, it is very easy to produce lists of students under various categories. It is possible to use an information retrieval programme which could print a list on demand; for example: all Kenyan students who are studying engineering and are sponsored by Kenya Railways: such a report can be set up and printed in less than 15 minutes. The tables of statistics of currently registered students are invaluable to the administration. The use of a registration transcript on which all of the students' personal data is printed is a way to expedite the registration of students at the beginning of each academic year. On the student record file other information can be held for use by other systems, like student finance, residence, courses taken, and examination grades.

(b) *Postgraduates*

A postgraduate student record system will hold similar personal data to that held above. In addition, other specific data can be held. A fee table can be produced, for at the University of Nairobi fees differ according to whether the postgraduate is a member of staff or not; whether he is full-time or part-time; whether his type of course is course work only, part course work, or only research and supervision; whether the method of research is full-time or part-time; and whether laboratory or computing fees are to be charged. Any combination of these may be applicable. Other information can be stored on the title of thesis, names of supervisors, date of reports submitted etc.

3. *Examination Processing*

In the University of Zambia the undergraduates follow a course credit system of accumulation of course units in order to qualify for graduation. In the University of Nairobi, a more rigidly defined subject-based system is used over a definite number of years of study. In the former case manual administration of the record of grades of more than 1,000 students is almost impossible. In the latter case 5,000 students' annual grades

have been handled manually but with severe difficulty and delays.

A computerised system can produce class lists for use during the academic year, for course work and mid-year assessment. From the updated class lists a preprinted mark-sheet can be produced with the appropriate number of copies for the University examinations. The marksheets can be preprinted on different colours for different copies without carbon paper using carbon impregnated paper to improve security. Once the examinations are marked the results can be entered onto the computer file and a computer printed results list can be produced for each school or faculty. If supplementary examinations are necessary these can be similarly processed. Once all the results and comments have been made the official University transcripts of course grades can be printed on the computer.

4. *Timetabling: rooms, examinations and courses*

The timetabling of room allocation is a severe problem. It is exaggerated by the unrealistic demands made by the schools or faculties in their requests for accommodation. To use the computer for this process has very real advantages but it does require considerable administrative discipline. It is necessary to have clearly defined class sizes and lecturer availability within schools or faculties. Much literature is available in computer journals on the programmes developed for timetabling.

One way in which the computer can easily be used is not to produce the complete timetable on the computer but to produce an up-to-date summary of the current room availability. If a system for processing examination results has been established, an important report available for these files is a conflict matrix. This assists in the compilation of an examination timetable, when the number of students taking different combinations of subjects is known.

5. *Residential Administration*

It is quite unusual in a University for residential accommodation to be provided for the majority of the students. It is usual that there is a vast discrepancy in the standards of available accommodation which can be the cause of great criticism of the University's administration by the student body as a whole. It may be desirable to achieve an even mix of students from all years and all faculties in all University accommodation. There may be another policy that dictates a certain desirable aspect of "residential mix". Whatever is the established policy it will be necessary to implement this free from all aspects of human favouritism to avoid student unrest.

In Nairobi 2600 students were allocated residence at random using the computer in September 1971. A discipline was adopted to enable the system to be executed without error. It was decided that a certain percentage of available places be reserved for new entrants and that the remainder be allocated to returning students in a fair manner. When all of the returning students had been allocated it was possible to print a random list of all remaining hall places. These places were then allocated by the office of Dean of Students using the random list. At the end of the exercise it is possible to print residential lists by hall and in alphabetical order. The effect upon the students when they consult a computer-produced list appears to satisfy them as a body that favouritism has been removed.

6. *Personnel Records*

The personnel records of staff in a University can effectively be computerised. Up to date records can be maintained on the consumption of leave, so that regular leave reports can be printed. If the personnel records are integrated with the payroll records, useful reports can be printed to show increment dates due, staff expenditure by departments, contract staff whose contracts are due to expire within six months. In addition it is possible to print periodically academic staff lists, residential accommodation lists, and a University telephone directory in both departmental order and by alphabetical order of staff name.

7. *Library Services*

A vast amount of information is processed in the University Library. It is desirable to ensure that the efficiency of the Library service is as high as possible. The areas of application are: maintenance of accessions lists, the ordering of new books, and the processing of book issues. The application of the computer to the University Library Service is a specialist area of computer science and is an expensive consumer of

computer facilities. It must therefore be decided how important it is to improve the Library Service and how soon the utilization of the computer can be afforded.

This is another area in which experience from other Universities can be drawn upon. Standard systems have been developed which can be implemented by undertaking the development from scratch. At the Institute of Computer Science in Nairobi an example of the use of the computer in this area has been developed.

A computer file has been set up on which are kept details of all accessions of books in the field of computer science. This enables lists by author/subject to be obtained for reference.

8. *Planning*

An annual exercise which the University is required to carry out is the production of the University financial estimates. This is a time consuming task and will eventually involve the preparation of at least one hundred pages of detailed estimates. With the latest software available it is now possible to produce a complete financial model of a University which can be related to the number of students expected to be enrolled in each area of study. Such a model can access the files of personnel records and expenditures records and enable the production of estimates to be a routine task. Other aspects of physical planning and capital expenditure can also be evaluated in this way.

9. *Admissions*

Another annual exercise for a University is to select from school leavers and mature age applicants for admission to the different programmes of study. Usually the University regulations are framed to permit only certain subject combinations and grades of the applicants in the school examinations. In both Nairobi and Lusaka applicants for admission are processed on the computer. In Lusaka each candidate in the final year of school is sent a preprinted University application form on which the choice of courses is filled in by each applicant, and the form is returned only if University entrance is sought. Once the examination results are received on magnetic media from the examining body they are merged with the applicant's data. The computer is able to produce selection lists in an order of ranking required by the University. In Zambia the admissions system is expected to evolve into a more general Tertiary Level Education Selection system for all post school institutions.

General Remarks

As stated earlier a telephone directory file on a computer may be set up which enables a departmental and alphabetical telephone directory to be maintained. One of the problems that can arise in this connection is that whilst the computer may take 30 minutes to print the lists it may take the printing and duplicating section a further 3 months to produce the plate necessary for the reproduction of the duplicate copies required by the University. One way in which this can be avoided is to directly print the list upon continuous master sheets that can be sent straight to the Printing and Duplicating Service.

It should be stressed that none of the above applications can be undertaken without the proper staff. Most major systems like 1 and 2 above would require a small team comprising a System Analyst, a Senior Computer Programmer, and a Computer Programmer. A realistic time scale for implementation of such major systems is between 12 and 18 months. It is worth noting that there is a world shortage of well-qualified and experienced systems analysts and senior computer programmers.

This means that an attractive salary must be paid and it is unlikely that such personnel can be recruited in less than six months.

THE COMPUTER SERVICES AND ADMINISTRATION

The University in a developing country is faced with severe demands upon its resources. It is not desirable to separate the computer services required for teaching and research from those required by the administration. It should be remembered that the computer services include not only the physical hardware, but also the provision of advice, the preparation of data, and the undertaking of programming and systems. Computer Science or Information Processing as a subject is also required to be taught as service courses to established courses in the University. It is well known that there is considerable difficulty in recruiting adequate staff for computing functions and one way that the young University can optimize its use of computer personnel is to include all the computer services under one roof in a Computing Centre. The difficulties of achieving this aim of establishing a central service will undoubtedly arise from the origin of the desire for computing facilities in the existing academic departments of

the University. Historically computers have been established in the Universities of Europe and America originally in the Departments of Mathematics or Engineering. Only in very few Universities have computers been installed separately for it is difficult to persuade the research mathematician whose interest is in Automata Theory to permit the administration to use the computer in his department for such trivia as student records and accounts. It is therefore necessary to establish guidelines for the administrators of the computer service in the University. It is my belief that the computing centre should be an academic department within the University whose responsibilities include the following provisions:

a. teaching courses — undergraduates and extra mural;

b. advisory service for research and parastatal uses;

c. computer processing service;

d. preparation of data.

The most important element of control in the computing centre is to establish that no application of the computing service be undertaken unless its cost effectiveness has been examined in the administrative process. Control of the use of resources must be shared by all potential users in the University. A solution to this problem is the establishment of a computer committee which can exercise the rationing of computer services. The representatives on such a committee should come from each academic school or faculty and from all administrative departments and the senior members of the computing centre. This committee must be responsible for:

1. the administration of the computing and data preparation;
2. the acquisition of new equipment for the computer and for preparation;
3. the approval of new administrative projects to be undertaken using the computer service.

It is my belief that the administration of the computing services can be undertaken by establishing the operation of the computer and data preparation services on a self financing budget. The items included in the operating budget should include the cost for:

1. operating staff;
2. maintenance of hardware;
3. rental of data preparation equipment;
4. computer paper, cards, and magnetic media supplies;
5. maintenance of air conditioning.

The actual purchase and depreciation or rental cost of the computer can be borne as an item of capital expenditure or included in the charges for computer time. If an operating budget is thus established it will be necessary to levy a charge for computer time and for data preparation. If this is set up it will be necessary to include in the recurrent expenditure estimates for the University elements for computer services in the votes for The Registrar, the Finance Office, the Library, the academic activities of the Computing Centre, and Post-graduate research. If this is done a satisfactory control is achieved which enables the computing services to be shared without any disastrous wastage of the expensive services.

RELATIONSHIP OF THE UNIVERSITY COMPUTER CENTRE AND THE MINISTRY OF EDUCATION

At the University of Zambia in Lusaka in mid-1975 the Educational and Manpower Computer Bureau was established as a department within the Computer Centre. The terms of reference of this Bureau were for it to provide the Ministry of Education and Ministry of Labour with a full data processing service using the University computer. Naturally there are some obvious advantages of this close relationship with the University. By mid 1978 the Bureau had three Systems Analysts, one Senior Computer Prgrammer, four Computer Programmers, and a Data Controller working full-time on different systems. These include General Students, School Statistics, Form Three Examination, College Statistics, Form Five Zambia Certificate, Zambian General Aptitude Test. By early 1981 the proof of the viability of this relationship should be known. It is my opinion that it is a worthwhile relationship for any developing country to consider.

THE ACADEMIC SERVICES

As stated earlier there may be some conflicts of interest on the placement of the academic activities related to computer science/information processing subjects. I feel that it should be possible to set up a framework for the academic work to be undertaken along with the service activities. Such a framework is an Institute of Computer Science which provides the academic service courses as well as providing an appropriate postgraduate course with a practical emphasis towards the current applications of computers in developing countries. It is most likely that the needs will be in the two areas of computer science (engineering and scientific applications) and information processing (data processing, systems analyst, computer management, accounting systems).

FINAL REMARKS

Finally I would underscore the problems that can arise in the use of the computing services. First, a state of information pollution may be generated from over-use of the computer files. Second, there must be an examination of the cost effectiveness of any administrative application. Third, complete documentation must be set up for all systems prepared for the administration. Fourth, where inexperienced persons in the administration are to implement a computer based system, adequate training in basic computer concepts must be provided before the system is introduced. As stated in *SCOTT* (1971),[5] there is one question which occurs to most people: Why use computers when there is such unemployment in emerging countries? Most government departments and commercial organization are relatively new in structure and can use a computer at an early stage in their growth. The organization will have the advantages of up-to-date reports and files of information on which decisions for future development can be made, yet at the same time avoid the "clerical mess" that will require a computer solution at some later stage. As the population grows the expansion of the computer files and additional processing is insignificant compared with manual methods.

Notes and References

[1] For a general survey, see R.J.P. Scott, *Computer for Developing Countries*, East Africa Publishing House, Nairobi, 1971.

[2] R.J.P. Scott, *Computer Science/Information Processing for Development*, First Annual Symposium Kenya National Academy, Nairobi, October 1978.

[3] R.J.P. Scott, *Computers in University Administration*, 2nd Conference of University Administration in East and Central Africa, University of Zambia, February 1971.

[4] United Nations, *The Applications of Computer Technology for Development*, First Report ST/ECA/138, 1971; Second Report ST/ECA/176, 1976.

[5] British Computer Society, *Report on Degrees in Data Processing*, Computer Journal, November 1975.

Universities and Overseas Development

T.G. Bonner

(a) APPLIED RESEARCH FOR DEVELOPMENT

It is increasingly recognised that new initiatives are needed to encourage overseas Universities to take a more active role in identifying and investigating development problems. More emphasis on applied research and perhaps a little less on the academic research which has tended to dominate their outlook since their establishment should now be the aim in higher education institutions of developing countries.

The Swann committee set up by the I.U.C. to report on the subject of "British Universities and Polytechnics and Overseas Development" was aware that much more needed to be done in Britain to help this new orientation towards self-help in aid-recipient countries. The Report emphasised that more effort should be made not only to identify problems but also to find ways in which practical cooperation could develop between researchers in the U.K. and overseas institutions. The main task is to help the overseas institutions create their own framework of relevant studies and research for their own academic staff and postgraduate students, with the British contribution providing those essential avenues of investigation which are not readily available overseas. Part of this contribution would be to accept overseas research students for relatively short periods of study of perhaps six to twelve months in the U.K. as part of their post-graduate studies based on their home University.

A particular example of how this kind of cooperation could lead to a significant self-help programme is provided by the possibility of cassava ultilisation in West African countries. This development applies equally in other areas where this plant, or any tuberous plant with a high starch content, is readily cultivated. Cassava is a hardy, round-the-year crop having tubers which, after peeling to remove the glucosidic cyanohydrin which is present in the skin, contain up to 75% starch based on the dry substance. Starch itself is a primary commodity in widespread demand, but in addition the starch can be converted enzymatically into a glucose syrup which can be isomerised to a high fructose syrup, fructose having a sweetness factor three times greater than glucose. These syrups can be used in the baking, brewing and confectionery industries as sugar substitutes and

reduce dependence on cane or beet sugar importation. Of even greater significance is the fact that by further enzymic action the glucose produced can be converted to ethanol. This process is already in use in Brazil although at present cane sugar and molasses in the main are used for the fermentation to ethanol. The ethanol is already being incorporated to the extent of 20% into petrol in that country without any modification of the automobile engines for which it serves as fuel. Further, the aim in Brazil is to produce ethanol as the principal automobile fuel and a much greater area of cassava cultivation is planned for this purpose.

The enzyme technology for the fermentation procedures used with cassava starch are well-known. The enzymic preparations are stable, some being used at 100°C and they are commercially available at remarkably low cost. Some of the enzymes need a critical calcium content in the aqueous media in which they function and this necessitates knowing the nature of the local water supply where the fermentation process is to be installed. Another matter that needs local attention is the demonstration that no significant quantity of cyanide from the glucosidic cyanohydrin in the peel gets into and survives in the fermented liquor.

Cassava, or any other similar source of starch when used in this way, is a potential base for industrial development in many countries. Few countries, apart from Brazil, have made a start in this field. As each country will have its own problems and possibilities, there is no better place to initiate the study of these indigenous factors than in the University science faculties of the countries which are the primary producers. The study of the optimum conditions for the production of starch and for monitoring its enzymic conversion through oligosaccharides and disaccharides to glucose will require good analytical facilities in Chemistry Departments undertaking these studies. An important stage will be setting up a pilot plant preferably but not necessarily in cooperation with an appropriate Department of Engineering and at the same time a feasibility study will have to be made to decide the scale on which larger plants should be planned, i.e. related to the inputs and requirements of village, regional and national communities. These studies together with parallel studies on the potential needs of the industries utilising the fermentation products of starch could be carried out by a Department of Development Studies.

In embarking on a new field of study of this kind for the first time, an overseas Chemistry Department would no doubt like to see a similar study simultaneously undertaken in the U.K. on the basis of the closest possible cooperation, and there is no doubt that with the right approach and the help of the Inter-University Council this cooperation could be readily established. In the final stage, the importation of chemical plant will be necessary. There are specialist firms in the U.K. which have wide knowledge of the appropriate forms of technology transfer needed for the design and operation of production units at different levels of functioning in developing countries. Consultation with these firms with the help of the U.K. University or Polytechnic scientists will no doubt play an important part in ensuring the successful operation of the chemical plant finally installed.

One feature of this planned cooperation would be the opportunity given to an overseas research student, once he had gained some knowledge of the local problem at his home University, of spending some months in the cooperating U.K. University or polytechnic and visiting the industrial firm specialising in chemical plant design in order to benefit from the experience of those carrying out this work in the U.K. On returning to his own University he would be able to advance their study of the problem considerably.

In considering the most useful part the U.K. could play in this kind of project, it is evident that the Polytechnics with their traditional interest in applied science could have a role no less significant than that of the Universities which developed such a close association with overseas Universities during the period of establishing the latter institutions. It is reasonable to accept that the greater expertise of the Polytechnics on the transference of laboratory science to the industrial plant makes them useful partners in the supportive role that the overseas Universities would want to see provided.

There are unquestionably many studies of this kind which can be identified. The occurrence of a molluscicide in the soapberry plant product, Endod (Phytolacea dodecandra) in Ethiopia, which is potentially capable of controlling schistosomiasis, is one study which could be taken up in other countries. Another problem which is common to many countries is that of plant parasites, particularly the Orobanche species which destroys large areas of certain crops annually through a sequence of steps initiated by the exudation of a chemical from the roots of the crop plant which stimulates germination of the Orobanche seeds. In both these cases there is a significant contribution to be made by University chemists in cooperation with scientists in other disciplines. Another field in

which chemists have not yet taken sufficient interest is that of leaf protein. Even in the U.K. it has been calculated that the edible protein which could be recovered from the leaves of potato, sugar beet and other discarded vegetable growth would supply as much protein as that obtained from home grown beef. Much more research is needed on plants producing protein. Oil-seed residues in particular could be a substantial source once the flavour problem is overcome. The great attraction of leaf protein production is that it is readily adaptable to the village community level. Other studies include plant sources of biologically active chemicals, essential oil, the water hyacinth problem and marine sources of chemicals and food. These are the kind of programmes of study which are under discussion and planning in the South Asia Regional Network for the Chemistry of Natural Products, an organisation linking Chemistry departments and research institutes in that area. One of the main considerations of this organisation is not only the accumulation of new knowledge on the natural resources of the region but also the creation of the appropriate technology for its development. Such regional networks will no doubt be set up eventually in many other areas, since they meet a fundamental need wherever there is an abundance of renewable natural resources.

A major effort is required to achieve this re-orientation of research work in overseas Universities. Not only problems but people have to be found who are willing to engage in investigations with the application of which they have previously had no familiarity. Also interdisciplinary cooperation has to be established where it has not previously existed. Different backgrounds, attitudes and experiences of the scientists taking part in joint operations play their part in influencing whether or not a project gets under way efficiently and effectively. Any new venture has to be monitored constantly to ensure that difficulties are overcome as quickly as possible. One has to recognise that a scientist who has been persuaded to move away from his own pure research studies to a practical, applied problem can very soon feel a strong inclination to return to the former once he meets unforeseen difficulties outside his normal experience.

However, the scope for a major step forward in applied research studies in overseas Universities is now unquestionable. What is now wanted is the imagination and the initiative to reveal these new studies and to pursue them until their practical application in developing the relevant resources of the country has been fully realised.

(b) UNDERGRADUATE TEACHING AND DEVELOPMENT

It is important that students of chemistry should be given some knowledge and direct contact with problems of the application of chemistry, particularly in developing countries. One way in which this can be done is to adopt a similar "Industrial Chemistry" course to the one which we have had for the past seven years in the Chemistry Department at Royal Holloway College, University of London.

In this course the students, in their third year, spend two full weeks visiting different industrial chemical firms for either one day or two day periods. They receive lectures and demonstrations from the industrial chemists concerned and in addition one half day is taken up in each visit with a case-study discussion of a recent chemical problem with which the firm had to deal. The students, in small discussion groups, are given details of the problem and some relevant background information. They then discuss possible ways of dealing with the problem and in so doing have the industrial chemists available to give them any further information they request to arrive at a correct solution. The students in each discussion group then prepare a report of their views on how they would have dealt with the problem. Finally they have these views subjected to questioning and criticism by the other groups and by the industrial chemists.

During a visit of several weeks to the University of Kuwait about five years ago, I visited industrial and agricultural centres outside the University and found an encouraging willingness to cooperate in an applied chemistry course of the kind described above. A meeting was held in the University of Kuwait between members of the Chemistry Department and representatives of these outside chemical centres to plan an industrial chemistry course but unfortunately it was not taken beyond the planning stage. There are of course difficulties to be faced in introducing a new course of this kind. If it is not feasible to fit it into the normal time-table in the University teaching term, it will be necessary as at our College to have the students spend two weeks outside term time, i.e. during normal vacation time, on the course. Whatever innovation is necessary, however, it is in the interests of the students and the country to provide the knowledge and experience of seeing chemistry in its practical function of helping to meet the needs of the country.

Information and Report

*The Development Cooperation Work of Irish Universities and Institutions of Technological Education

Paud Murphy

Although Irish people have been involved with the third world for many years and Irish missionary and voluntary organisations have also been actively involved in countries like Nigeria, Zambia and Peru, the official Irish Government Programme of Development Cooperation really began with Ireland's entry in the E.E.C. in 1973. In that year, in the Department of Foreign Affairs, an Overseas Development Assistance Division began work and, in the following year, an Irish Agency for Personal Service Overseas (APSO) was established to promote work by Irish people in developing countries. Over the next few years, an organisation to involve Irish Semi State Bodies in work for developing countries — DEVCO — and an umbrella organisation for Irish voluntary organisations — CONGOOD — were set up. During the same 6 years, the Irish Government's allocation to development assistance increased from £800,000 in 1972/73 to £14,000,000 in 1979.

In 1975, at the invitation of Professor Dawson, the Registrar of Trinity College Dublin and Dr. Whittaker, the Chancellor of the National University of Ireland, and also Chairman of APSO, Irish Universities and Colleges of Technology were invited to come together to form a group to involve their institutions more closely in development cooperation activities. The Group came to be known as the Higher Education Consultation Group and it has representatives from each of the Colleges of the Irish Universities: University College Cork, University College Dublin, University College Galway, St. Patrick's College, Maynooth, Royal College of Surgeons in Ireland, Trinity College Dublin and also from institutions of technological education: Bolton Street College of Technology, Kevin Street College of Technology and the National Institutes of Higher Education in Limerick and in Dublin. In May 1978, the Group established its first full-time secretariat and operates from 11, Ely Place, Dublin 2.

The Irish Government identifies Zambia, Tanzania, Lesotho and the Sudan — in Africa — and India as the 5 countries on which Irish development cooperation activities should concentrate. While the Higher Education Consultation Group is concerned to use the resources within Institutions of third level education in Ireland to serve developing countries as a whole, the initial concentration of activities in developing countries has been on those five and, in particular, on the 4 in Africa. HECG has a number of projects in each country. For example, in Tanzania, the Division of Veterinary Science in Morogoro is being assisted by the Department of Veterinary Medicine, University College Dublin. UCD provides lecturers for one term visits and also provides teaching materials. In Lesotho, the Department of Chemistry in Kevin Street College of Technology is establishing a course to train medical laboratory assistants. Kevin Street is supervising the educational aspects of the course, helping with recruitment of staff and assisting with teaching aids, curricula and evaluation visits. The Department of Accountancy in University College Dublin is assisting the University of Zambia to get a new course in Business administration off the ground and has recently helped to recruit staff and develop some teaching materials. In the Sudan a new National Institute of Animal Production was planned, with the help of 5 senior veterinarians and agriculturalists from Irish Universities. Now, with the appointment of a new Director, it will shortly get more Irish support. So, the HECG is involved in many activities in developing countries, in particular in the 4 Irish concentration countries in Africa and will continue to support Departmental and Faculty links with Institutions of Higher Education in those countries.

The HECG is, obviously, not only concerned with Universities. For example, in Lesotho, the Kevin St. College of Technology is assisting the Lerotholi Polytechnic and in the Sudan we hope to provide some help to the Khartoum Polytechnic. However, in addition to working with institutions such as Polytechnics, the HECG is concerned to

use the resources available within Irish institutions to help other development activities in Africa.

Provided that the work can be done by an Irish University or College of Technology, there are no restraints on the type of work undertaken and the HECG can work with organisations and departments in and outside of Government.

Separately from its work in developing countries, but obviously very closely linked, is the work to identify areas of need and help establish courses for students from the third world in Ireland. A number of such — mainly graduate — courses have been established. In Trinity College, a course in Systems Development, leading to the award of an M.Sc., is run entirely for students from the third world. In University College Galway, a course in Engineering Hydrology, leading to the award of a Master of Engineering (or a Master of Science, depending on the students primary degree) and entirely for students from the third world, will begin in October 1979. In University College Dublin, the Department of Inorganic Chemistry runs a course every 3 years for graduate chemists from developing countries. Trinity College Dublin, University College Dublin and the National Institute of Higher Education in Limerick jointly run courses in Library Science for students from developing countries. The HECG informs its members of the need for a particular course, encourages them to find out more about this need and helps them to plan the course and to locate funds to enable the courses to begin.

Within Ireland also, the HECG is concerned to increase the awareness of problems of the third world among its member institutions. It does this by circulating a newsletter, informing its member institutions of developments in the third world and by encouraging more teaching related to development activities in courses within member institutions. There are a number of courses in Ireland, for both Irish and foreign students, specifically geared to look at the problems of the third world. One such course is the Masters Programme in Development Studies, run in University College Dublin.

Finally, the Group is closely involved in the Planning and implementation of Ireland's overall development cooperation policy. It maintains very close relations with the Development Cooperation Division of the Department of Foreign Affairs and with the Irish Agency for Personal Service Overseas, as well as DEVCO and CONGOOD. In regular meetings, our attitudes and the view of our member colleges are put before the other bodies concerned with Irish development cooperation activities and we are able to work together on particular projects and to pass on requests for help from third world countries.

In the future, we hope to involve Irish Colleges of Education and the Regional Technical Colleges more closely with the HECG to further promote useful development cooperation activities. We also hope to learn from the experience of IUC, DAAD in West Germany and NUFFIC in the Netherlands in establishing our programme. This cooperation may also effect a common policy on the development cooperation activities of European institutes of third level education and so ensure more useful projects in the third world.

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*Appropriate/Intermediate Technology

In *Overseas Universities* No. 25 John Twidell reported on developments in the University of the South Pacific. A variation on this theme — and requiring an extension of the connotation of this label — is recorded in a recent *Newsletter* (No. 25) of the Technology Consultancy Centre (T.C.C.), Ghana. The *Newsletter's* appropriate items are as follows:

"MACHINE TOOLS
Negotiations were conducted with the Intermediate Technology Development Group Limited and the Ministry of Overseas Development for funding for a T.C.C. project to make machine tools available for small engineering firms in Kumasi. As a result a grant of £20,000 was approved for the scheme.

The aim of the project is to enable local small scale industries to take up the manufacture of products pioneered by the Centre's Steel Bolt Production Unit. These include engineering and coach bolts, spares for vehicles and agricultural implements and bolts for the building construction and boat building industries. In the past the transfer of this activity off the campus has been prevented by the difficulties in obtaining the necessary machine tools. Now that funds are available in foreign exchange, the Centre will import used machine tools for resale to local industries wishing to engage in the new activities. Initially, some seven established clients of the Centre have been invited to participate in the project. In a pilot scheme introduced in 1977, two capstan lathes were sold to clients on easy payment terms. Now with the increased funding more than 20 additional machines will be available.

SUCCESSFUL WEAVING WORKSHOP AT BONWIRE
Between the 12th and 18th July 1978 the T.C.C. was engaged in carrying coal to Newcastle in that it

mounted a weaving workshop in Bonwire, the home of Ghana's famous Kente weaving industry. Almost every male in Bonwire from a very early age is skilled at weaving on the 4 inch Kente loom. However the object of the workshop was to demonstrate the use of the 40 inch broadloom on which the T.C.C. has been training weavers since 1973.

The workshop was organised by Mr. S.O. Adjare. Assistant Research Fellow, and involved the movement to Bonwire of the whole T.C.C. Weaving Unit including the Supervisor Mr. O. Abo-Boateng, twelve trainee weavers, eight looms and ancilliary equipment. The workshop was opened by Nana Osei Amoako-Mensah, Kwamohene and the Bonwirehene was present to welcome the T.C.C. to his village. He said that in the past he had considered broadloom cloth to be inferior to Kente but that he was impressed by the quality of Mr. Adjare's simulated Kente broadcloth. To confirm his appreciation he placed a substantial order for broadcloth for his personal use.

The weavers of Bonwire took a professional interest in the new technology and many came to try their hand on the looms. They appreciated that not only could traditional plain striped Kente designs (but not the intricate patterns) be produced much faster but that other items such as furnishing fabrics, napkins and tea towels could also be produced on the broadloom. A great deal of interest was also expressed in the ancilliary equipment which could also be used with the traditional Kente looms. For example, the warping mill allows warping to be undertaken both faster and with less effort than by the traditional method. Another advantage is that the new technique can be undertaken indoors whereas the traditional process must usually be done in the open because it occupies a good deal of space. Bonwire weavers were also impressed with the T.C.C.'s locally made bobbin winder and many requests were received from would-be purchasers of this item.

In Bonwire there is a taboo which prevents women from weaving on the kente loom. Consequently, a good deal of astonishment was expressed when it was seen that five of the T.C.C.'s trainee weavers were women. It may well be that if the broadloom becomes accepted in the Ashanti craft villages it will free women from the effect of the taboo and allow them to participate in this potentially lucrative craft industry.

BROADLOOM UNIT OPENS AT KWAMO

Following the Bonwire Workshop, four looms were delivered to Kwamo village to create the nucleus of a Broadloom Production and Training Unit. This Unit will act as an extension of the T.C.C.'s on-campus unit. It is under the supervision of Mr. George Bawuah and presently employs six trainee weavers; two of them girls. The progress of this satelite unit will be watched closely as it is later hoped to establish other similar units at Wonoo and Bonwire.

Ejisu District Education Authority are now employing five graduates of the T.C.C.'s Broadloom Weaving Unit as weaving instructors in continuation schools and more are required. The Kwamo unit, being in Ejisu District, will contribute to this effort as well as generating opportunities for self-employment in the village".

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*"External Examiners" — a Comment To The Editor

Dear Sir,

I read Mr. Omolewa's article (in Overseas Universities No. 25) on External Examiners in Ibadan with great interest, having served there as External Examiner over a period of five years, both for PhD and for diploma examinations. I am glad that Mr. Omolewa comes down in the end for external examiners.

My experience has included practice with and without external examiners. Quite apart from any specific Nigerian problems (and I question whether there are any more specific problems in Nigeria than anywhere else!), an external examiner, one hopes, brings a breath of fresh air into examining at any institution. He sees the scripts, or he interviews the students, without knowing any of their qualities or failings other than those indicated at the examination. If he is wise, he listens to local opinion but, in the final analysis, also keeps his own counsel. To the student he is guarantor of as objective an assessment as can be had. If the department is wise, its staff takes most of his criticisms, and assesses their views against his for the improvement of the curriculum, the examination, or the general work of his department.

The alternative — no external examiner — in these days of equality and litigation — leaves any examiner exposed, and the head of department even more exposed to charges of unfair/biased examining, over-severe marking of papers, and so on. This is particularly true where it is also held by teaching staff that any interference with the professor/lecturer marking his own papers/questions is an infringement against academic freedom.

From a legal point of view, this seems to me dangerous, besides having the effect of making departments even more inward looking than they might be.

I very much sympathise with the notion of African external examiners examining in other African Universities (or in any other Universities). It seems to that a great deal of money is wasted in visits by examiners from Europe or the United States of America; and where there are two examiners, one might well work by correspondence with the other travelling to the University (with a turn about in alternative years). I have been most impressed by standards at Ibadan, and I am sure the kind of suggestions I am making would not harm the University's standards. I am surprised to hear of examiners coming "for the trip": I did not find any in my tours. I found a very dedicated team of colleagues in other subjects. On the other hand one might need a tailoring of examining arrangements and very careful planning if some of the work is to be done by correspondence.

I think there can be no fear that external examiners are an aftermath of "colonialism". They are an essential part of today's "examination package" indicating that justice is seen to be done as far as is humanly possible, and bringing to any department worth its salt a comparative view to the subject, to the department and the problems of its development which is invaluable to any group of University teachers and their students.

Yours sincerely,

P. Havard-Williams

Loughborough University